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ZOUKEI-MURA'S HE. 219!

WHO

FIRST LOOK

AITOR AZKUE BUILDS A TEST
SHOT OF THE NEW 1:32 KIT



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MICHEL GRUSON'S ROYAL AIRCRAFT FACTORY SE.5A "HISSO" WINGNUT WINGS 1:32

I was advised to make a Wingnut Wings kit because as you'll see, the Wingnut Wings kits are simply stunning! The assembly is so easy that it is quite disconcerting, the adjustments are devilishly precise and the boxes are so full there is just no room to swing a cat! From among the many possible choices from the range, I decided that the famous fighter RAF SE.5A 'Hisso' powered by a V8 Hispano Suiza was worth a go. As soon as I opened the box, I understood I was in the presence of a true gem! In spite of the very high level of details, I used a few additional tricks, especially with the dedicated Eduard photoetch set and with the flat 'aerodynamic' rigging lines chosen from in RB Production's catalogue, which are essential to recreate an exact copy of a SE.5A.

Lets get deal now with the assembly: it starts with some minor work concerning the inside of the fuselage. In the first phase, I replaced the internal rigging, once the painting was done, with stretched plastic wires which bring much more depth and realism. Another enhancement was the seat cushion, which was reworked with an additional layer of two-part putty.

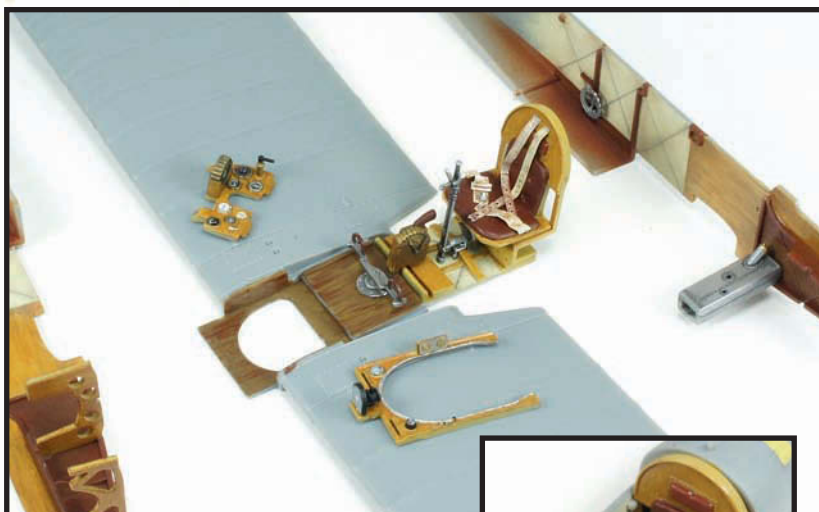




COCKPIT

The internal sides of the fuselage and the floor are painted in Tamiya XF 55 Tan as far as the canvas sections are concerned, and a pale wooden finish for the rest of the structure. For the different wooden finishes comprising the model, the basic shade is acrylic paint while I created the wood grain effects with an application of oil paint over this.

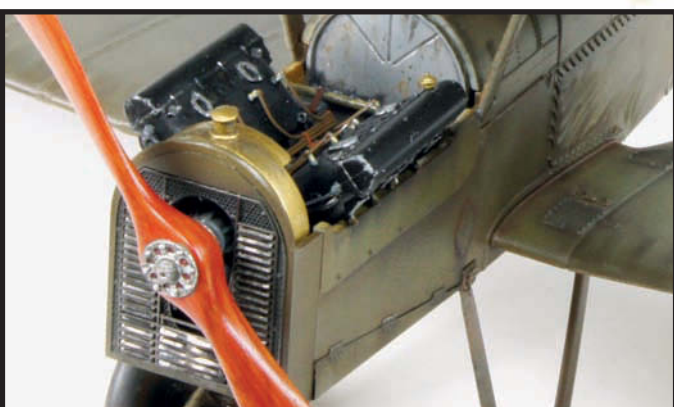
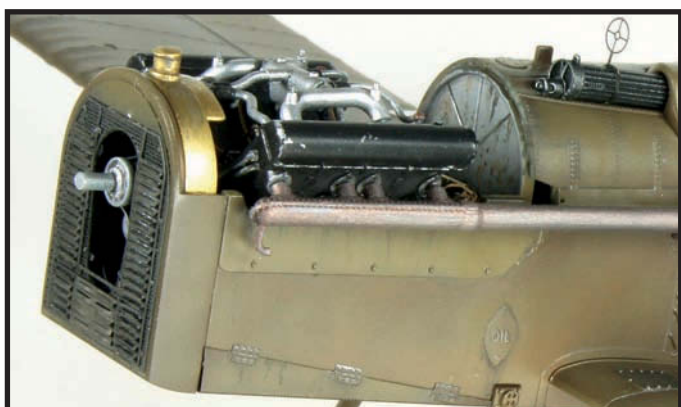
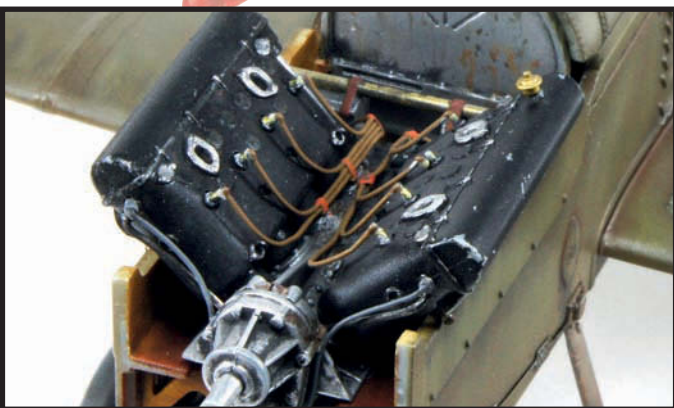
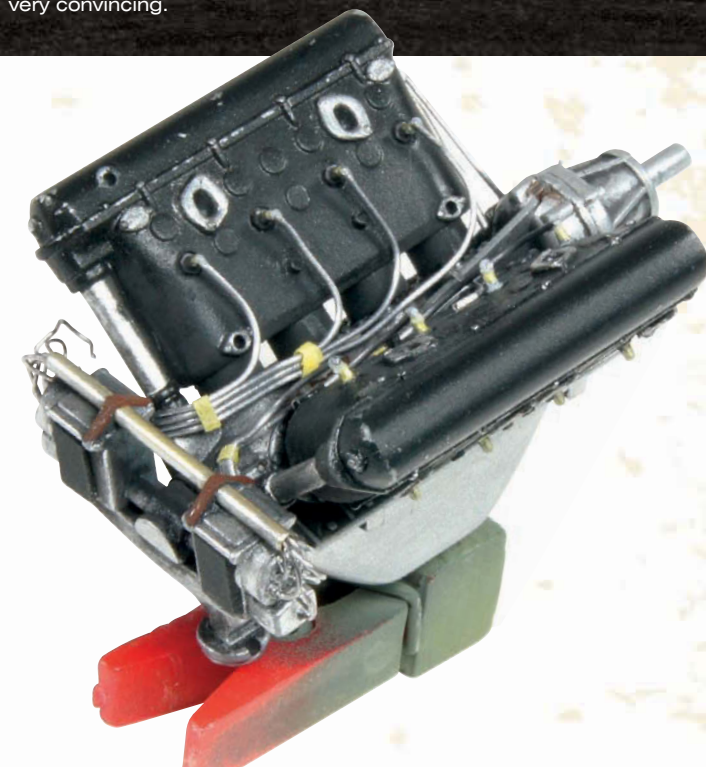
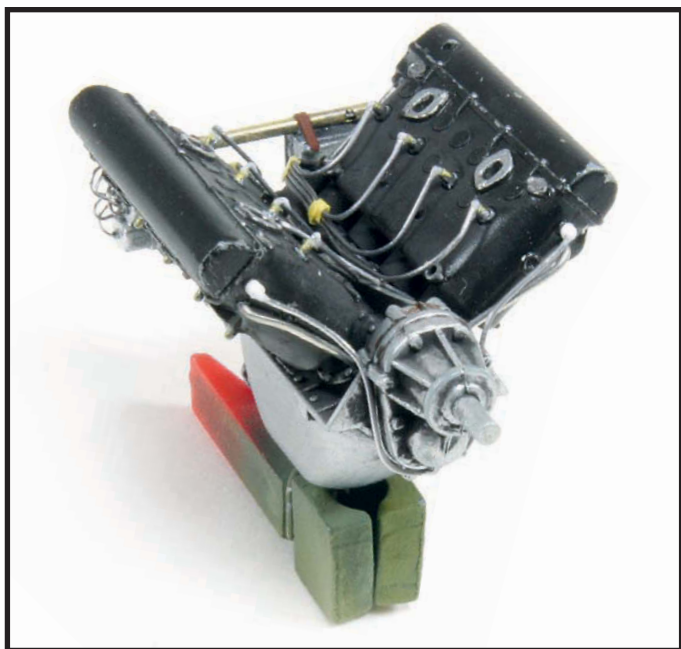
The assembly and painting of the cockpit is more than enjoyable because it is particularly precise and complete. Most of the elements are painted in a wood finish, and for the instrument dials I used the excellent kit decals. Once they were positioned, I applied a drop of white glue to give the impression of the glass. The control cables were not ignored, and again they were made with stretched sprue. All the pieces were finally ready to be assembled, and it was time to close the fuselage which was refreshingly problem-free!

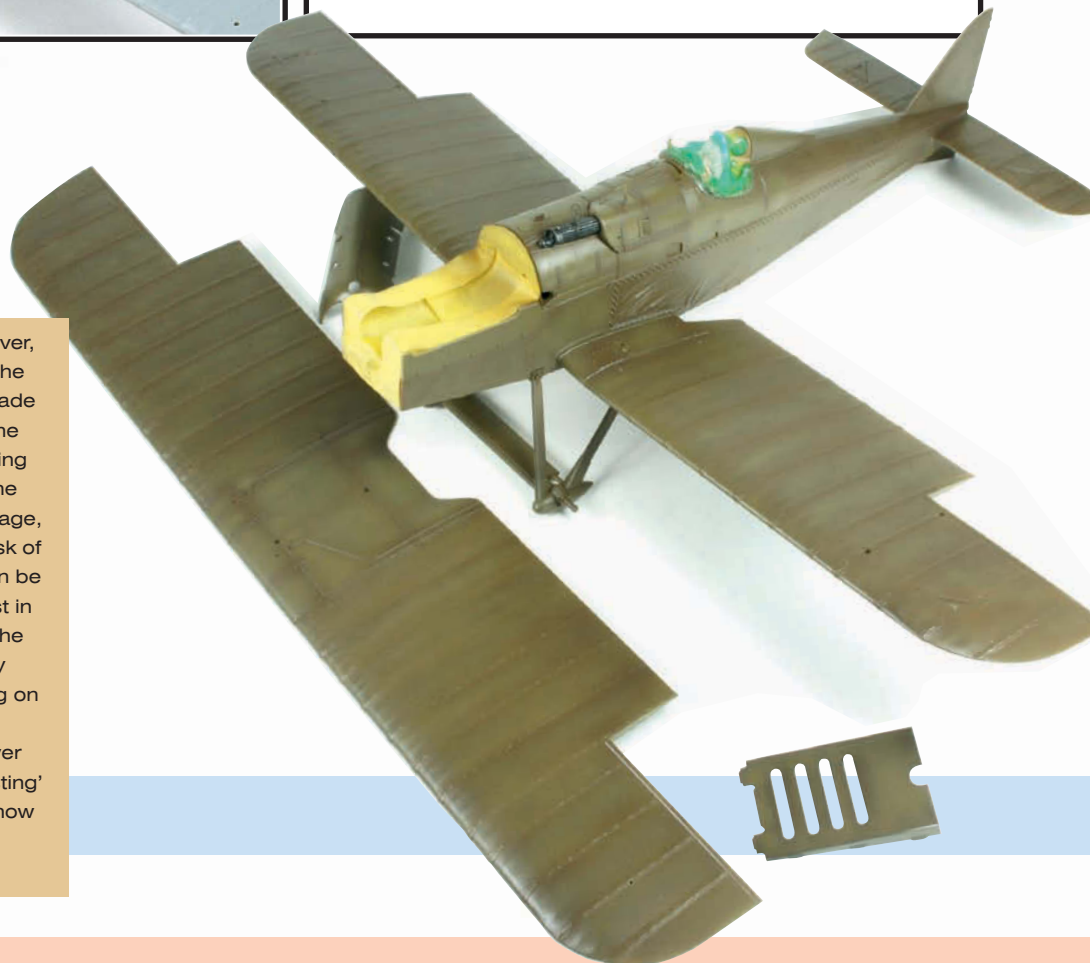
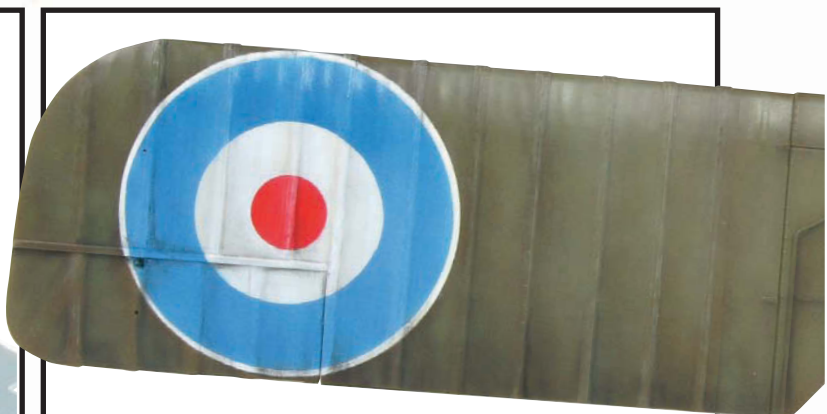
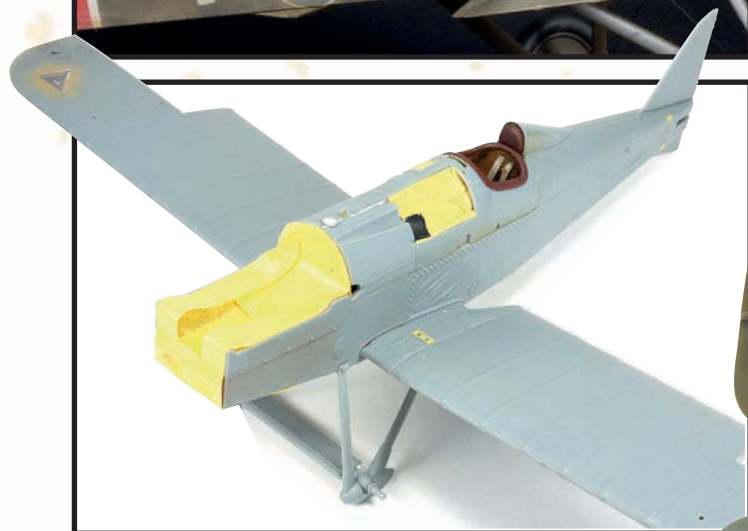


ENGINE

Before starting the painting of the plane, each sub-assembly is built and one of the largest chunks is the V8 Hispano Suiza engine. This is almost a stand alone model because of the high number of pieces. It is very complete, only missing the electrical system so I decided to complete the details by adding reproducing the whole electric system using lead wire and brass micro-tubes. The engine was then painted with the different colours recommended by the excellent full colour instruction booklet, and dirtied with dark pigments and brown wash. The long tailpipes are painted with a first layer of Spanish Copper Rub N Buff before being slightly oversprayed in black in order to darken the whole thing and tarnish the metallic brightness. Rust pigments were dusted on and sprayed with matt varnish fix them.

The machine-guns are absolutely splendid and the photo-etched pieces bring even more sharpness. They are traditionally painted in black and drybrushed with aluminium. The propeller is painted with a base colour of Tamiya XF 68 before imitating the varied wood shades with red and Burnt Umber tones of oils. Then varnish is sprayed to seal the whole thing. Before assembling the wheels, I add a few spokes (stretched plastic sprue) which will remain visible through the valve opening. This modification is a small amount of work for a big enhancement to the model. Let's move on to the radiator, where Eduard parts bring a real bonus with the photoetch. The radiator grilles are highly visible although the fitting of them is quite laborious the result is very convincing.





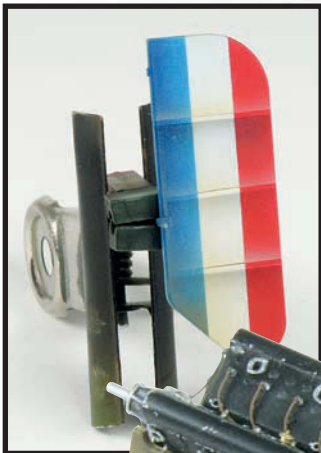
PAINT & MARKINGS

From the markings provided in the kit, I chose the D 351 '4', 6th Training Sqn AFC, from October 1918, mostly for the kangaroo logo on the red fuselage band, which gives our SE.5a an 'exotic' finish. With this aircraft's camouflage being plain, it's necessary to work on the shades to bring it to life.

Tamiya XF 68 was suggested by the instructions but I chose to use it mixed with a little red/brown XF 10, providing a personal touch to the somewhat disputed colour that is PC 10. This mix was generously sprayed over the whole kit. Then, so as to nuance the colour, raised areas have been sprayed with this same colour lightened with XF 26, and shaded parts are sprayed with my base colour mix darkened with green/black.

Let's move on to the undersides which were painted with a layer of XF 55 whose plain effect is broken up, with highly diluted white applied on the ribs. The hollows were darkened with XF 52, to strengthen the shadows.

Once the first phase of the painting is over, the decals can be applied. Number 4, the tail fin and the wings cockades were made with stencils, once again to modulate the colours. The second phase of the painting can start again. I decided to highlight the structural detail at the back of the fuselage, and I began the lengthy and tedious task of masking, using masking tape which can be repositioned at will. This task will consist in light and well-targeted spraying along the masking tape, which had been carefully positioned. I started with XF 55 spraying on the highest parts, which are the most exposed to light. Conversely, all the lower parts are darkened with very slight 'dusting' of X19 along the masking tape, hiding now the previous light shades.



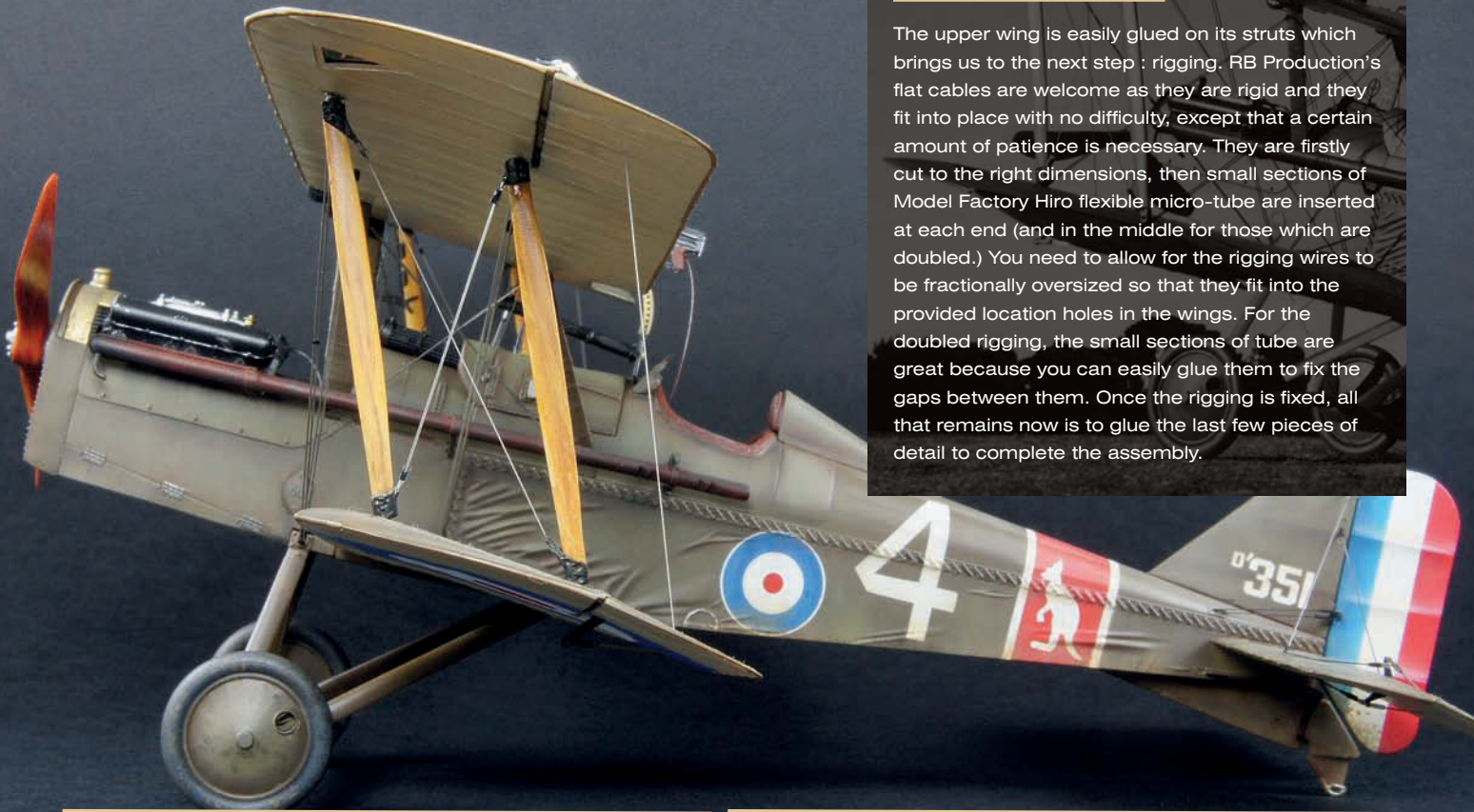
WEATHERING

I chose to do this mainly with oil paints and four colours were used: White, Naples Yellow, Burnt Umber and Black. They are applied with a brush, without dilution and as spread out as possible. Oil paints suit this perfectly because you can work over them with no rush, you can mix them and adjust the levels of opaqueness, fading it if needed with a cotton bud or even wipe it with white spirit. Black is applied first on the darkest shadow areas, having defined subjectively the position of the sun. Then it is a story of shading and layering as long as you respect the order from the lightest tint to the darkest. This is an important stage of the work as it brings the model to life.

Finally, so as to soften the contrasts, a highly diluted PC10 (tending toward green) is sprayed. All that is left to do now is to fix the whole thing by spraying a matt Prince August varnish.

RIGGING

The upper wing is easily glued on its struts which brings us to the next step : rigging. RB Production's flat cables are welcome as they are rigid and they fit into place with no difficulty, except that a certain amount of patience is necessary. They are firstly cut to the right dimensions, then small sections of Model Factory Hiro flexible micro-tube are inserted at each end (and in the middle for those which are doubled.) You need to allow for the rigging wires to be fractionally oversized so that they fit into the provided location holes in the wings. For the doubled rigging, the small sections of tube are great because you can easily glue them to fix the gaps between them. Once the rigging is fixed, all that remains now is to glue the last few pieces of detail to complete the assembly.





ROYAL AIRCRAFT FACTORY
SE.5a "HISSO"
 WINGNUT WINGS 1:32

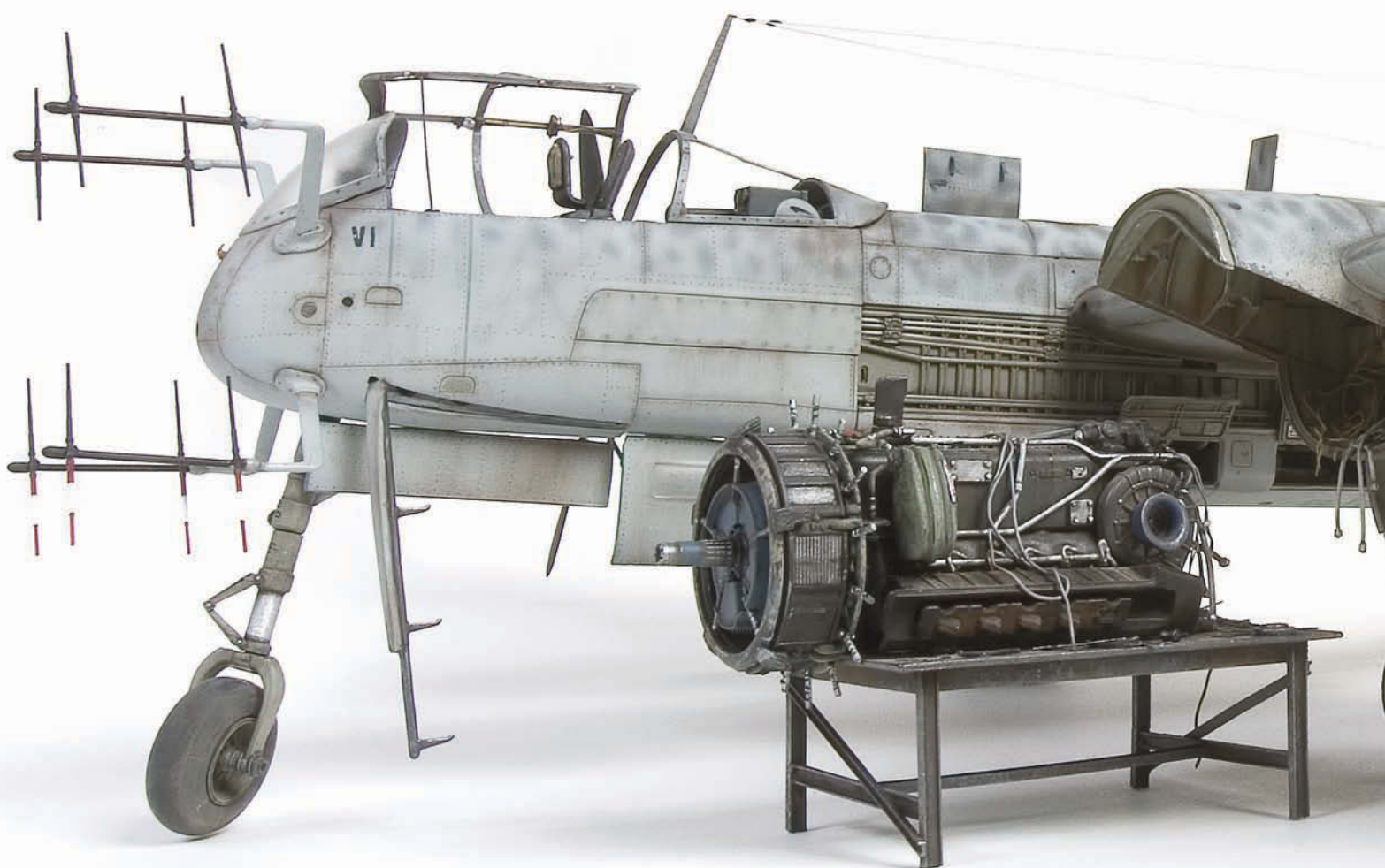
TO CONCLUDE...

I can now fully understand why Wingnuts Wings is such a success and so well thought of! I am from now on a big fan of this New Zealand brand!

W H U

FIRST LOOK AT ZOUKEI-MURA'S HE. 219!

AITOR AZKUE BUILDS A TEST SHOT OF THE NEW 1:32 KIT



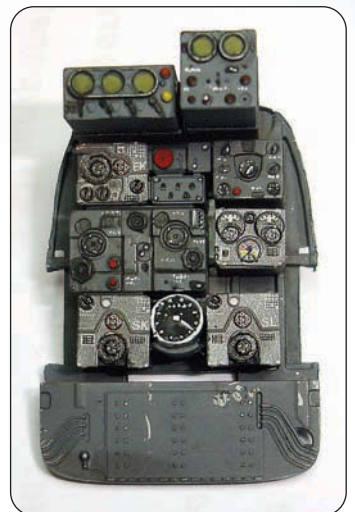
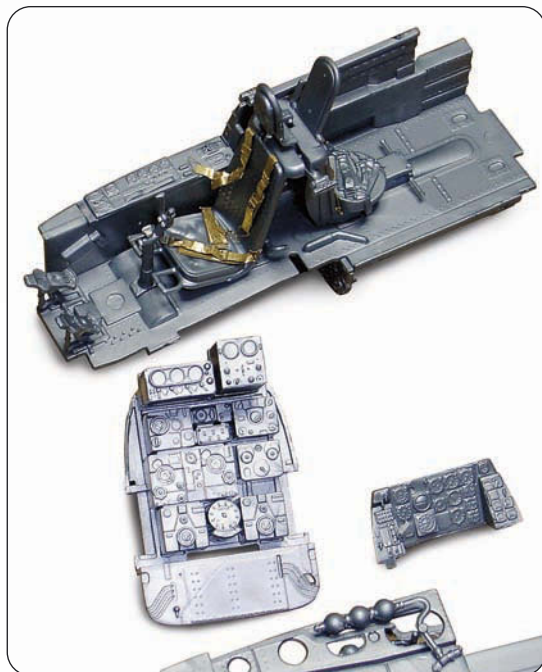


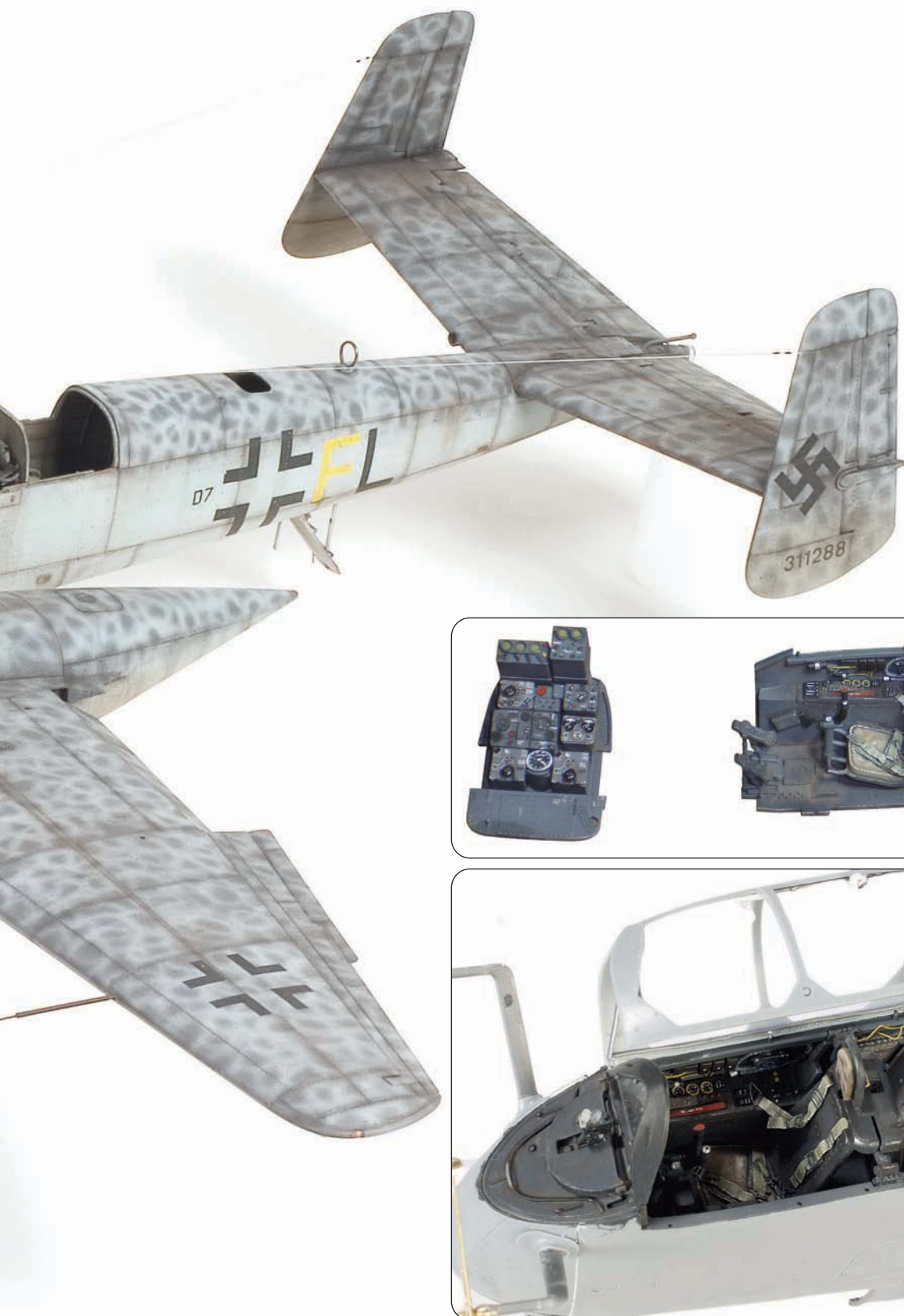
Japanese large scale specialists Zoukei-Mura have added the UHU to their Super Wing Series of kits. Zoukei-Mura have a very different approach to their kits with a structural design and a host of interior details and this kit is no exception. Along with the very detailed cockpit the kit provides a pair of complete engines, detailed weapons bays, detailed rear fuselage, fuselage fuel cells and nacelle anti-freeze tanks! The model that you see here has been built from an advanced test sample and consequently there are some areas that have been modified, most notably the canopies. Zoukei-Mura have delayed the release of the kit in order to modify the shape of the canopies and what you see here are the pre-modification examples, and hence the cloudy

Another 1:32 scale He 219?

unpolished finish to the nose glazing. Incidentally there are two sets of canopies provided - a complete conventional version with integral canopy frames and a set with just the clear parts and separate solid moulded canopy frames. Aitor has mixed the two types here with the empty frames fitted to the rear.

All the removable panels and internal detail mean that this is quite a demanding kit to build and even more so when you are working from improvised instructions. Aitor has added one or two of his own improvements along the way too to realise this stunning looking build, let's see what he makes of Zoukei-Mura's UHU.

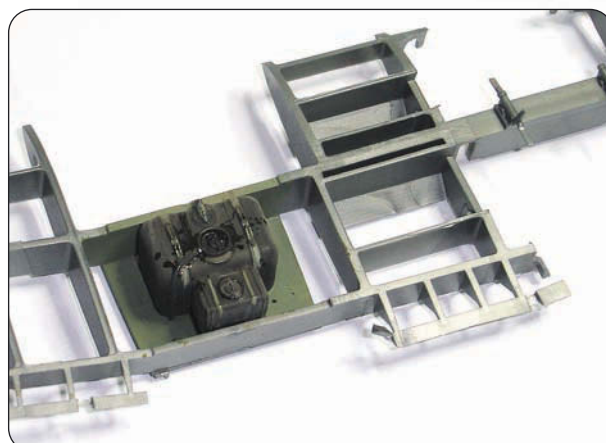
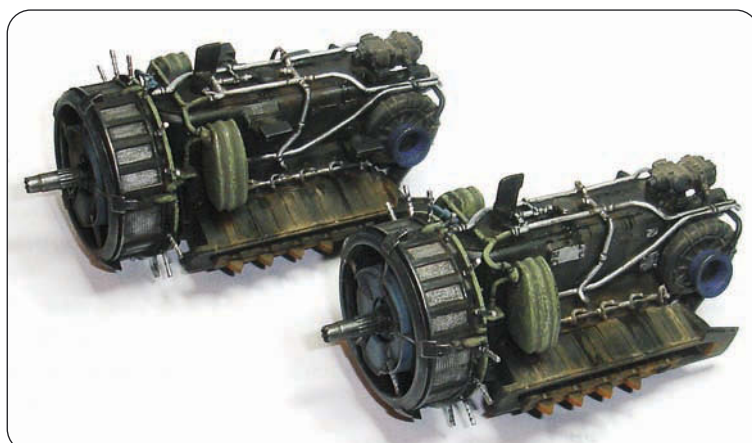




Zoukei-Mura's Kit

The kit is a high detailed one like all the Super Wing series. If you compare it with the new "Kagero" book on the UHU it shapes up remarkably well. I was somewhat surprised at the size of it too, not ideal for modellers with limited space! The test shots were moulded in silver, grey and black plastic but we understand that the production version will just be in grey which is very welcome news. Assembly of the kit is a huge job, it has of course the entire cockpit, but with control rods, and the compressed air system for the ejector seats.

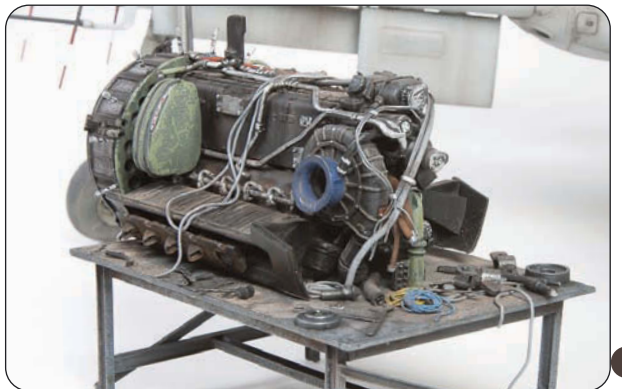
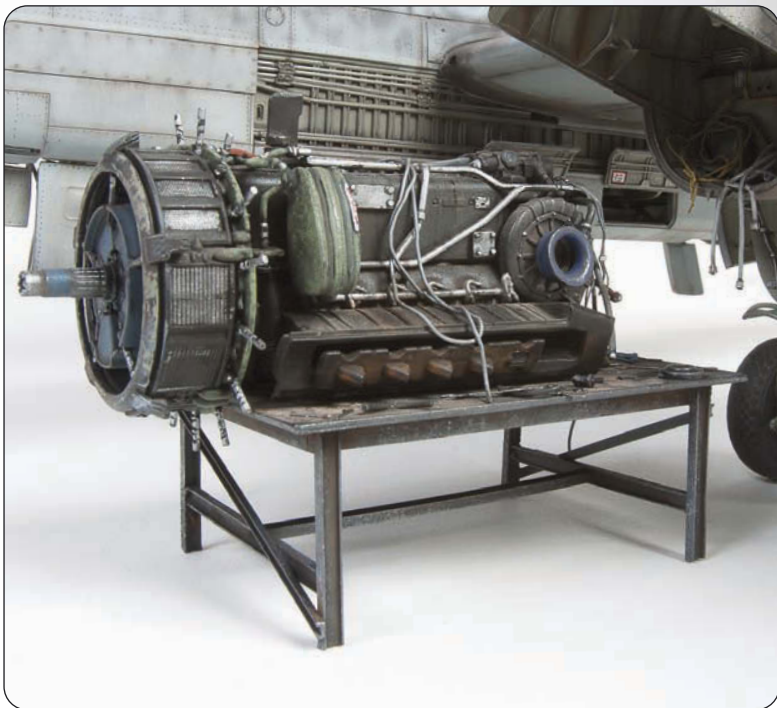
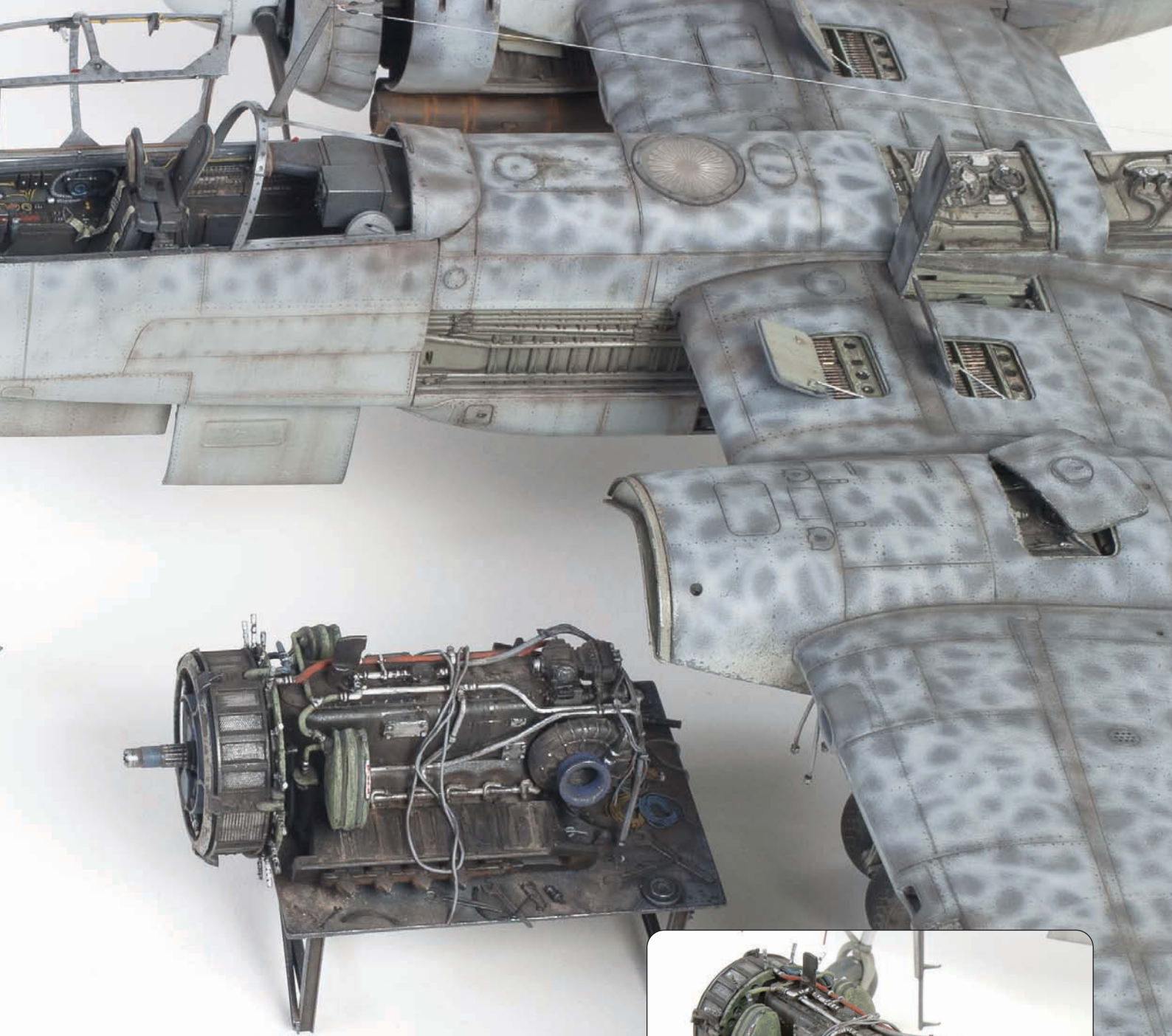
The engines are especially well done. They include lots of small details with wiring and pipes included. I added a few of my own additional cables of different sizes to add a little more detail but even built from the box the detail is excellent. Radiator louvres are supplied in both open and closed positions and separate cowling panels mean that you can easily display all this detail. Moreover, the engine kit comes divided in several sub-assemblies so that you can model it in different states of maintenance if you wish. The propellers are moulded as one piece so no worries about alignment.

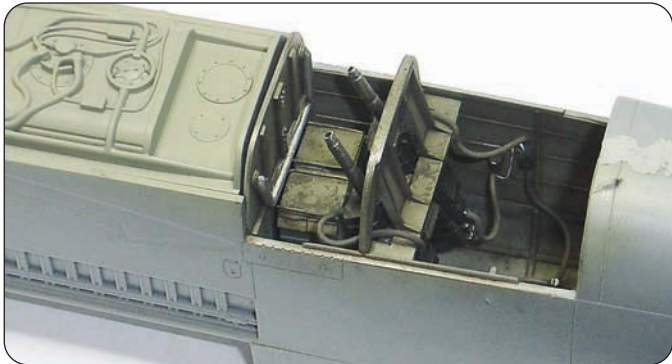
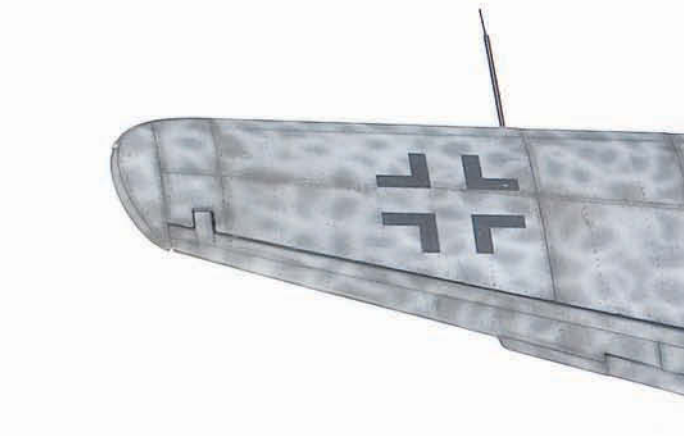
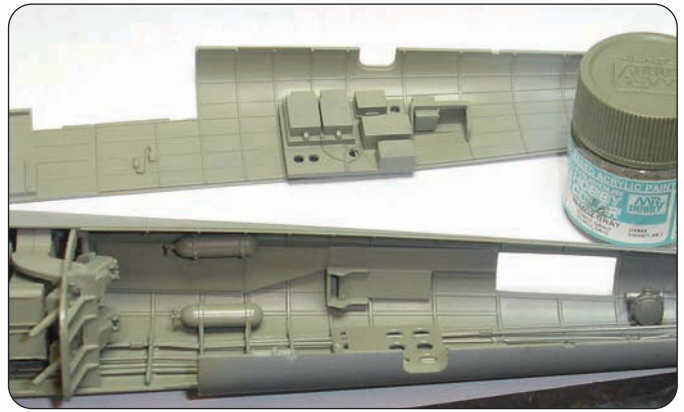
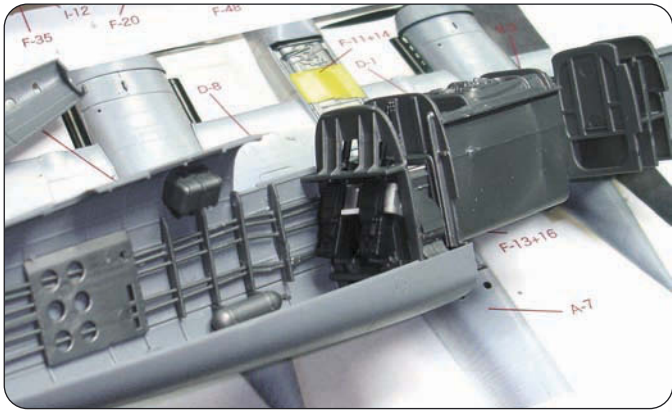


The kit provides a main spar and rib structure which mimics the real aircraft and slots across the fuselage like the real thing. Moving along the fuselage we can find wonderful details such as the fuel tanks, control rod and wiring detail and behind the wings are the two MK 108s 30mm cannons belonging to the "Schräge Musik" upward firing system. Even the inside of the rear fuselage is detailed with electrical systems boxes, control linkages and the tailplane de-icer heating unit is even provided. On the nose the 'antlers' mounting the FUG 220 antennas are moulded integrally with the cockpit firewall making for an extremely rigid mount with everything already aligned. The nose cone can be removed also to expose all this detail. Even though the individual dipoles are very good I changed them new turned brass ones from the firm Master Model.

You can open all the inspection panels connected with the gun bays and the kit provides good MG 151s and their ammunition feed systems. Likewise the belly weapon pod is fully detailed with 20mm and 30mm guns and their ammo feeds and openable access panels. The wheel wells are very well detailed and the de-icer header tank can also be exposed but the screw head detail is missing from the access panel for this and the nacelle fuel cell. As I was working on my build Eduard released their replacement UHU wheels and although the kit wheels are good, the Eduard ones have a diamond tread pattern like the preserved NASM aircraft, are weighted and have the manufacturers name on the sidewalls.







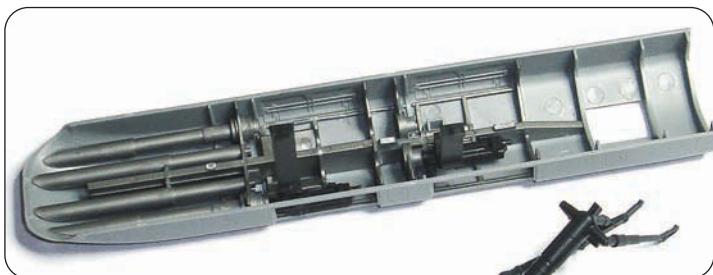
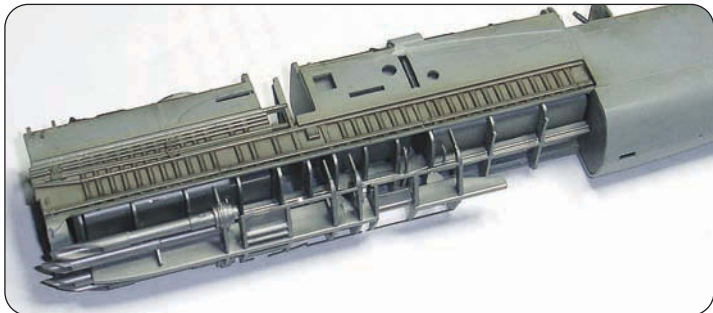


I opened up an additional inspection panel on the top of the starboard nacelle, making the new panel from plastic sheet and making my own internal detail with lead wire. Summing up the assembly this is an amazing kit with high levels of detail and beautifully done. Its a kit you need to concentrate on and take care to ensure all the separate parts align, but elements like the wings and nacelles which assemble onto the spar fitted beautifully. A build to savour and really enjoy!

Painting

I have used Gunze Sangyo colours, which have the perfect RLM colours for planes. After the pieces are painted I applied a matt varnish on them to give a satin finish.

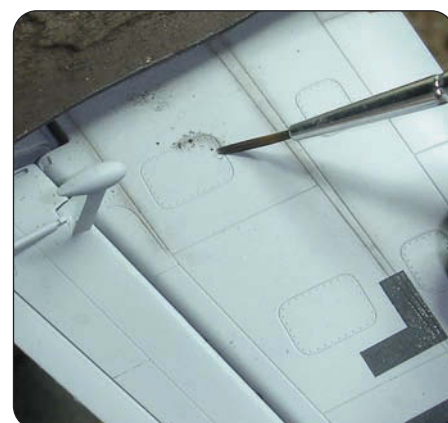
Obviously the first thing is painting the cockpit and insides of the plane before gluing the fuselage. For more info about how to paint the cockpit properly I would recommend reading with the new Kagero book (n° 49) about this plane. There you will find colour pictures of the original cockpit of this plane.

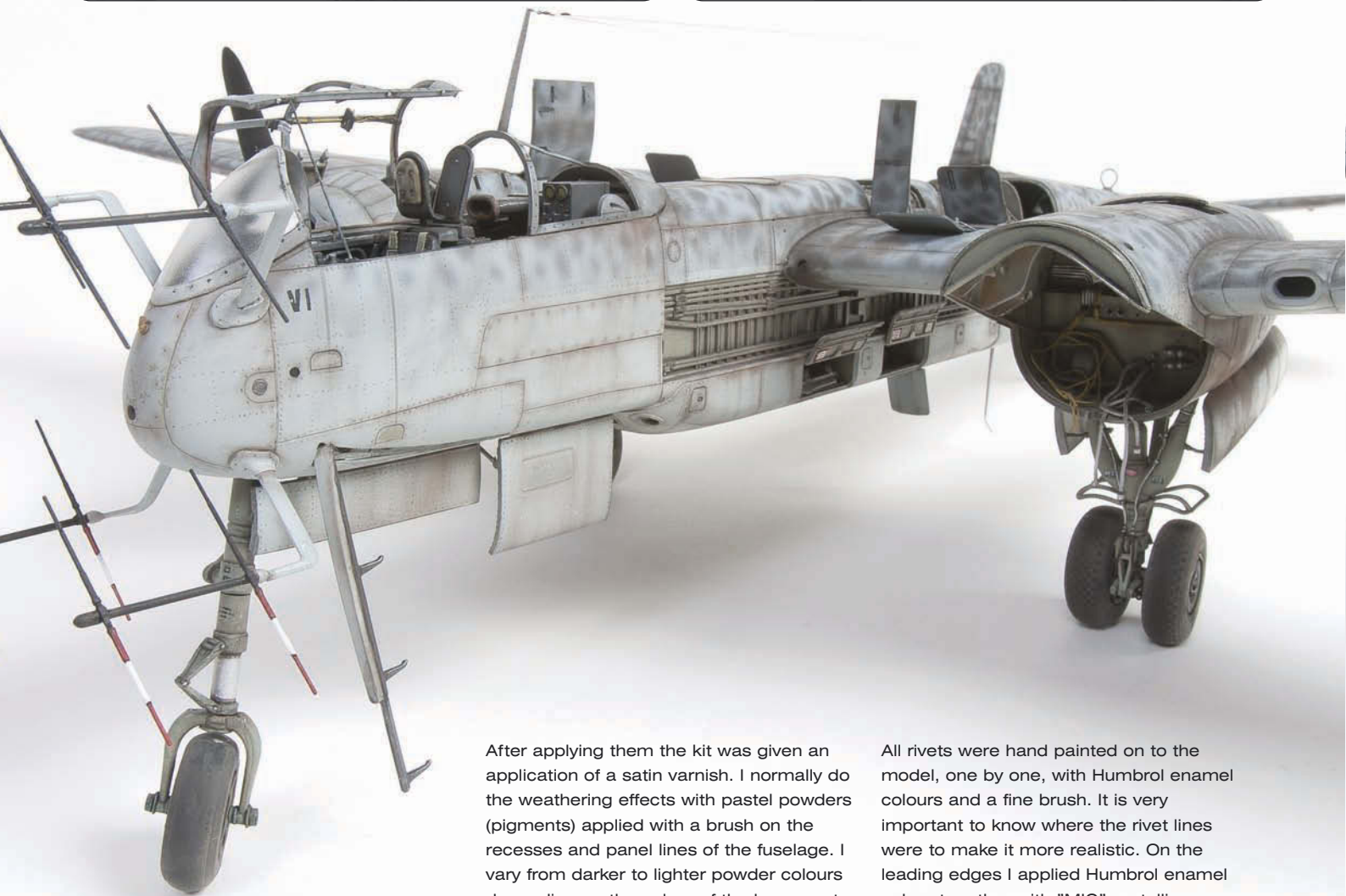
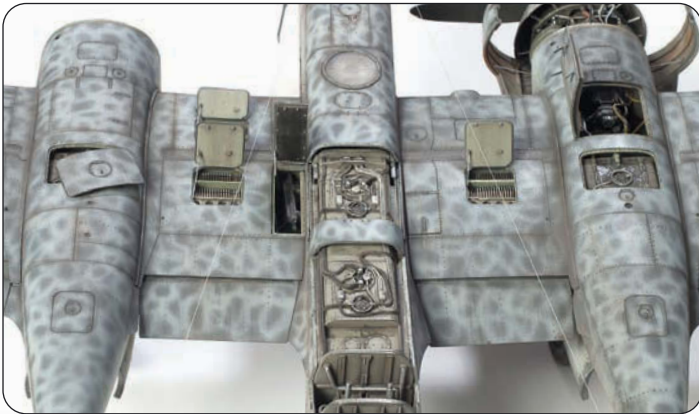




As for the internal parts of the aircraft, I recommend Gunze RLM 02 which I think is the best for this. As far as the fuselage is concerned I used RLM 76 over all of it. I then masked the lower sides and painted the upper surfaces with RLM 75. I mixed RLM 75 and RLM 76 in order not to have a big difference in the two colour of the camouflage. This slight change in the colour is not readily appreciated when the plane is finished, due to the weathering effects applied to it, but I did it anyway. The squiggle pattern was drawn on with RLM76 over the upper surfaces.

Once the paint is dry, I gave it a coat of gloss varnish using "Vallejo" products. This will be a perfect base for the decals. I trimmed the excess decal film and the decals are taken from my spares as none were available yet with the test shot.

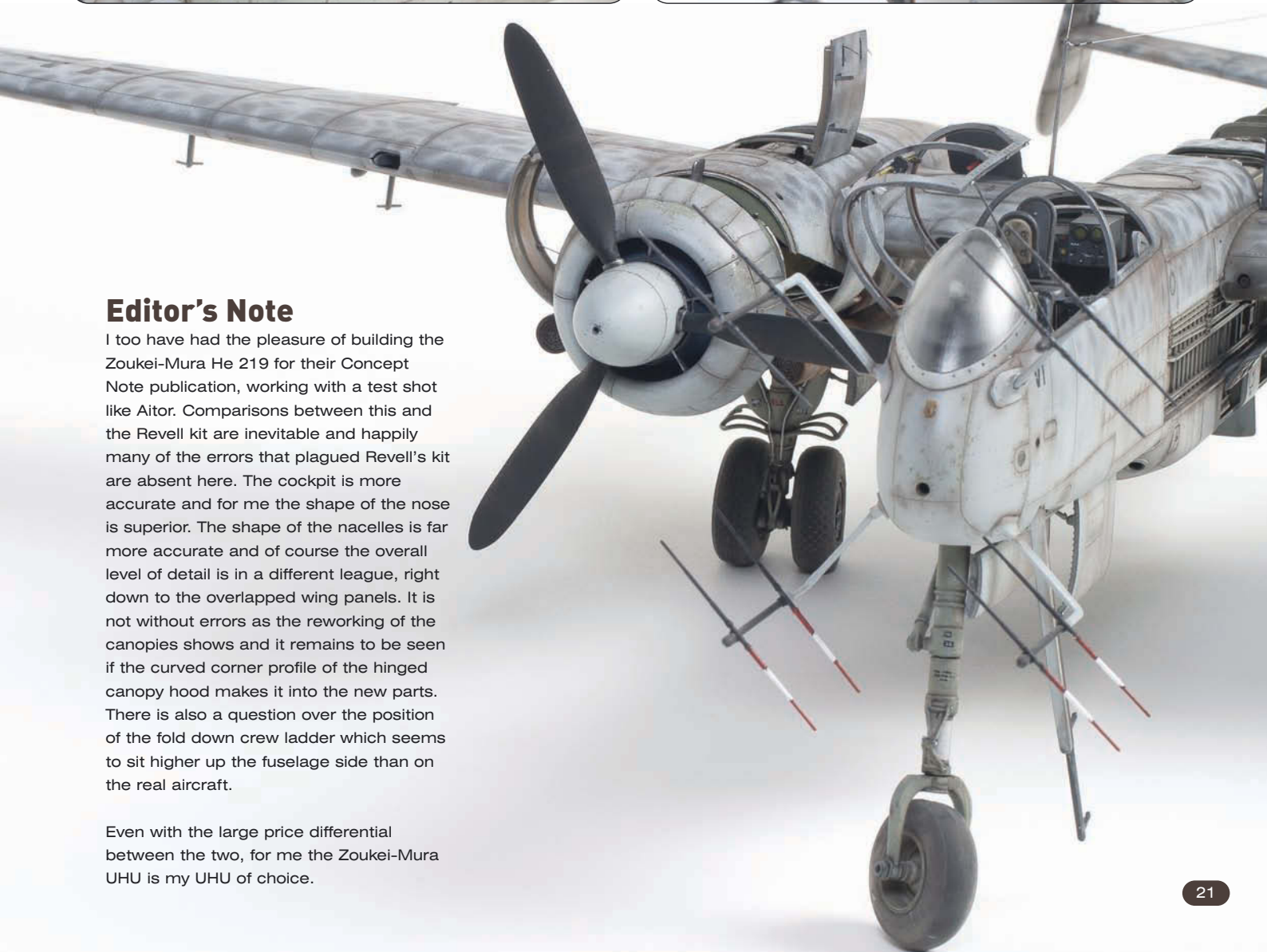




After applying them the kit was given an application of a satin varnish. I normally do the weathering effects with pastel powders (pigments) applied with a brush on the recesses and panel lines of the fuselage. I vary from darker to lighter powder colours depending on the colour of the base coat. All this brushing work will highlight the colour range of the plane. The dirt from the exhaust staining of the engines are done with pigments too.

All rivets were hand painted on to the model, one by one, with Humbrol enamel colours and a fine brush. It is very important to know where the rivet lines were to make it more realistic. On the leading edges I applied Humbrol enamel colour together with "MIG" metallic pigment for chipped and damaged paint.

This plane will be displayed in a diorama, where I think is the best place for it. I await the new canopy parts before I can do this.



Editor's Note

I too have had the pleasure of building the Zoukei-Mura He 219 for their Concept Note publication, working with a test shot like Aitor. Comparisons between this and the Revell kit are inevitable and happily many of the errors that plagued Revell's kit are absent here. The cockpit is more accurate and for me the shape of the nose is superior. The shape of the nacelles is far more accurate and of course the overall level of detail is in a different league, right down to the overlapped wing panels. It is not without errors as the reworking of the canopies shows and it remains to be seen if the curved corner profile of the hinged canopy hood makes it into the new parts. There is also a question over the position of the fold down crew ladder which seems to sit higher up the fuselage side than on the real aircraft.

Even with the large price differential between the two, for me the Zoukei-Mura UHU is my UHU of choice.

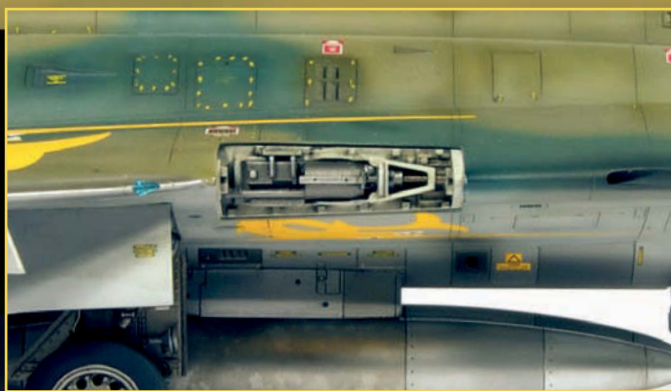
Hasegawa's one-forty-eighth scale

Saab J-35J

Broken



modelled by **Aleksander Sekularac**



My strange dream...

Two men were sitting at the wooden table and singing; between them an almost empty bottle of Akvavit. Weak midday light was coming in low from a half frosted window pane. One man was blonde, the other bald with red beard. They were simultaneously singing two different songs backwards. It sounded like ABBA.

A thunderous sound came suddenly from outside, increasing in volume and arriving to a booming crescendo, drowning all other noise. As if Thor was playing with his hammer, or perhaps the sonic barrier defeated by a low flying jet. The old window pane was in shards and a cold draft was now letting snowflakes to rush into the room.

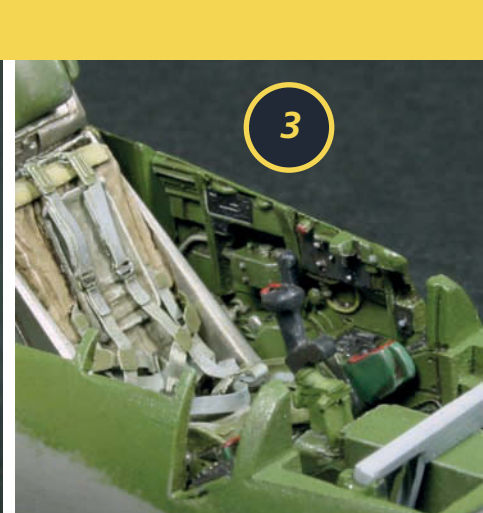
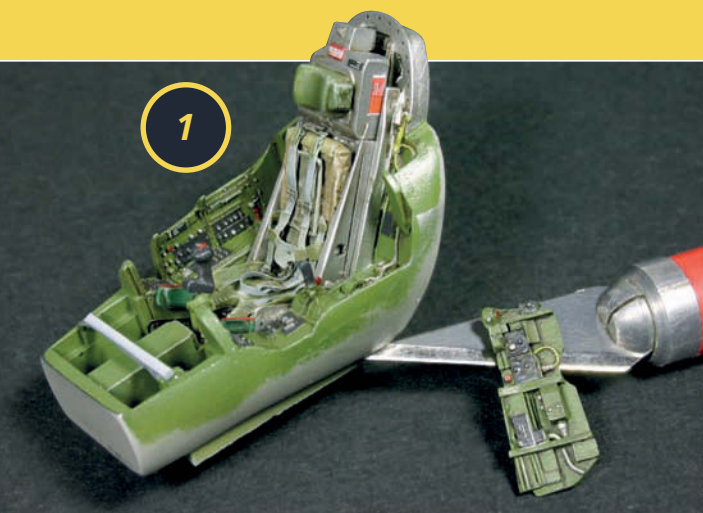
Music has changed - some more involving and heavier sound was coming through: like Änglagård, or Beardfish perhaps. Signal was weak and the music soon faded. The two men and the IKEA table were gone, and in their place an open fire burned in the middle of the room now, disturbed by the cold air. Steam was coming out of a big cooking pot suspended above the fire - the smell of reindeer blood-dumplings escaped from the rim and filled the room...

Serendipity

Was it a chance, a hand of fate, or subconscious intent? Never question those odd dreams, just be prepared for them... On my table was a Hasegawa box of the Saab J-35J. I opened it and looked inside: light-grey kit sprues, CD with reference photos, Aries Detail Set, few bits by Quickboost and decal bag from Twobobs; all was there. I selected the Swedish Prog-Rock playlist on my iPod and started working.

I still have a faint childhood memory of building a WEB-Plasticart 1:100 Saab J-35 model some 3 decades ago. Hasegawa's contemporary 1:48 Draken is consequently more than just a fine kit for me - it is a Japanese injection-plastic time machine. A second chance to do it right and leave fewer fingerprints on the model!

Alien looking, spatula-like J-35 came to life on the request from 1949 of Swedish Defence Material Administration for the new fighter/interceptor, capable of operation from public roads with easy maintenance and short response time. In 1955 the full scale prototype flew for the first time and by 1960 the fighter was in service. Apart from its homeland, J-35 also served in Finland, Denmark and Austria and managed to stay flying over four and a half decades (retiring in Austria in 2005). Fast and agile it remained the pride of the pilots to the very end. It must have been quite a site back in the '60s, as it looks modern even today.



Hasegawa's Draken

Hasegawa's kit is, fitting to its brand reputation, very nice indeed. One can leave it as it appears in wrappings, or take it as far as the road goes. My roads tend to be quite meandering, without identifiable arrival time and often with unforeseen events swaying the traveller. This is what makes the experience more interesting.

Chinese philosopher Lao Tze said: "The journey of a thousand miles begins beneath one's feet." Certainly a thought to ponder, especially in ancient China. I can imagine old Lao now, in a "Turkish Airlines" commercial, sitting in business class, rephrasing his thoughts: "Be sensible - the journey of a thousand miles begins in a cockpit." Why not, let us start there...

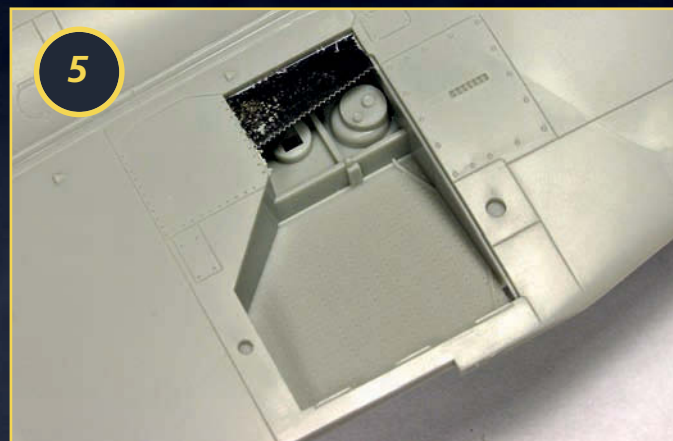
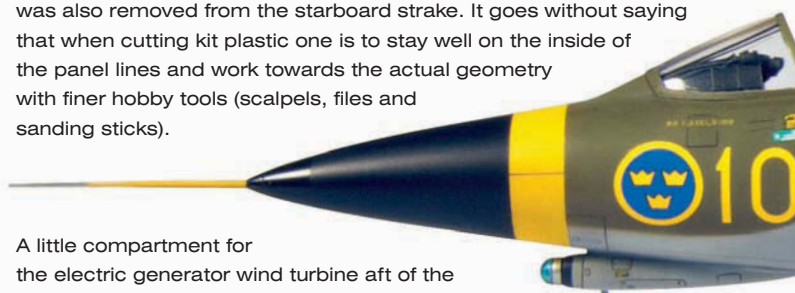
Apart from an excellent cockpit, Aires Detail Set for the J-35F/J contains also new control surfaces, air brakes, landing gear bays, exhaust nozzle and gun assembly. All this is rendered in a clever combination of cast resin and photo-etched metal bits. Inside the cockpit almost all kit parts are replaced: sidewalls and the tub, ejection seat instrument panel and control stick, as well as front cover beneath the windshield. It all completes a very believable "office" (**Picture 01-03**). Sandpaper and care are needed in equal amounts to dry-fit the resin cockpit tub and nose undercarriage compartment within the fuselage halves. Straight from the box this marriage did not look very happy.

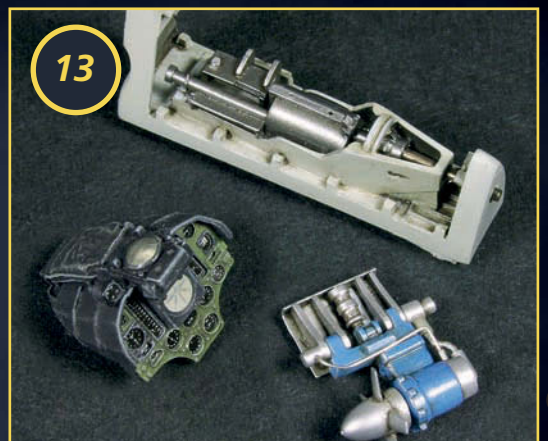
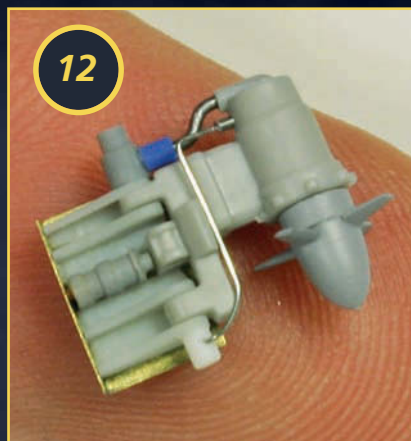
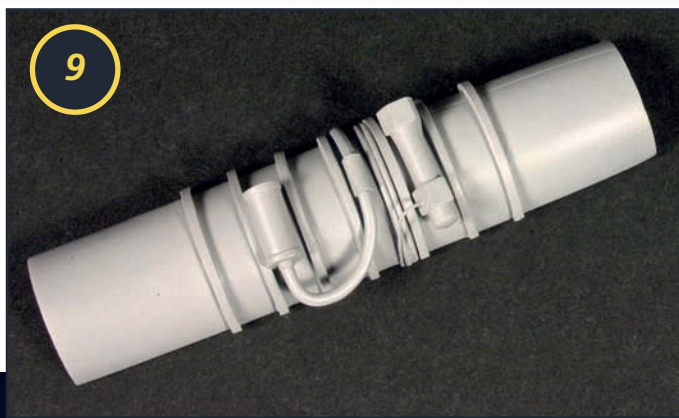
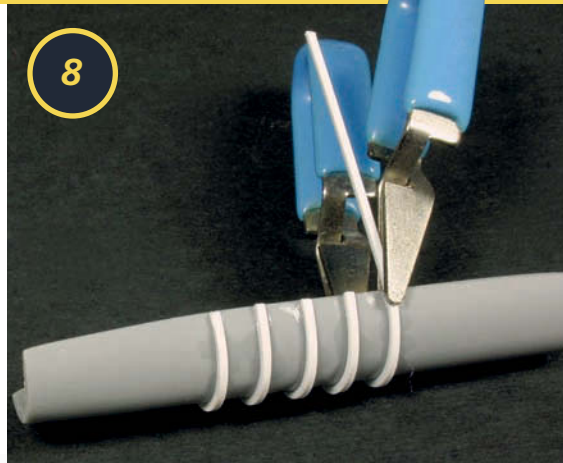
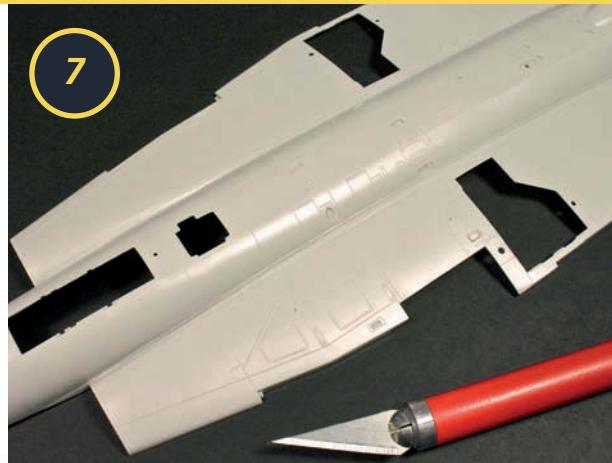
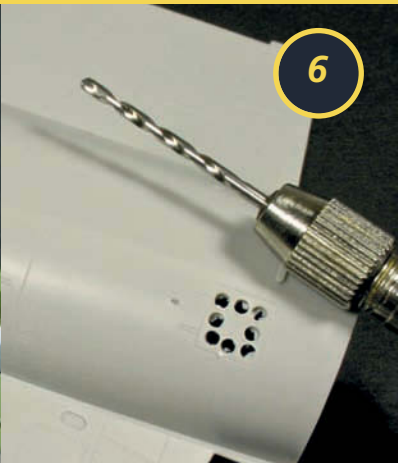
For the resin undercarriage compartments to be installed one has to remove the original ones, which are moulded together with the bottom fuselage half (**Picture 04-05**). Doing this, one has to be careful to leave a smooth inner surface around the bay openings, as the resin boxes need to be butt-jointed. Sanding, thinning and leveling all inner walls around the openings is essential.

Four rectangular holes were also cut open on rear fuselage, where the resin plugs for the new air brakes assemblies in the open position will be inserted (**Picture 06-07**). The gun access panel was also removed from the starboard strake. It goes without saying that when cutting kit plastic one is to stay well on the inside of the panel lines and work towards the actual geometry with finer hobby tools (scalpels, files and sanding sticks).

A little compartment for the electric generator wind turbine aft of the nose gear bay was also removed. In reality there was no enclosure for the retracted turbine, but rather a lot of busy piping, hydraulic gear and sidewalls of the inlet air ducts on both sides. I've removed the small box from inside of the fuselage and then scratchbuilt the appropriate details, trying to stay true to the reference photos (**Picture 08-11**).

The wind turbine and its mount was re-shaped and detailed with wiring and plastic bits from my scrap box. The gun assembly is a single resin plug with beautiful detailing. Only the gun barrel is a separate part - here I decided to replace it with a bit of syringe tubing. Instead of painting the barrel I just held the steel tubing inside the candle flame until it required the proper dark colouring - the rest of the gun was painted with various shades of Alclad and MM Metalizers (**Picture 12-13**).







14



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Rear fuselage was now prepared to receive a new resin jet exhaust pipe with detailed afterburner, as well as small triangular fairings with lightening holes, revealed on the sides of the aft wing root when elevons are deflected. Aileron panels were cut-off from all the wing segments, to be replaced with Aires parts in deflected position. The airframe was slowly coming together helped by some putty here and there (**Picture 14-17**).

After more dry-fitting and sanding a finished resin cockpit was sitting properly inside the fuselage. A HUD lens, made by drilling a shallow recess, was filled with Future, floor polish. I had to refill several times, as Future tends to shrink as it dries. The two longitudinal braces visible under Draken's windshield were made by securing appropriate lengths of steel wire at the front lip of the cockpit (**Picture 18-19**).

Looking through my reference photos, I found several where Draken's air ducts were closed with plugs painted in yellow and black stripes. The starboard and port pugs had different stripe arrangement, presumably to differentiate between them. I found this a very interesting detail to add to my model. To prepare the base for the plugs I closed the air ducts using styrene sheet cut-outs, leaving just a small lip of the oval inlet. The plugs themselves were cut from thin brass with small details shaped from the same material (**Picture 20-21**).

Additionally, I cut off the rudder from vertical stabilizer to reattached it at the final stage of assembly, for more realistic appearance. The small air inlet at the leading edge of the vertical stabilizer was opened and slots made from bits of styrene strip (**Picture 22-23**).



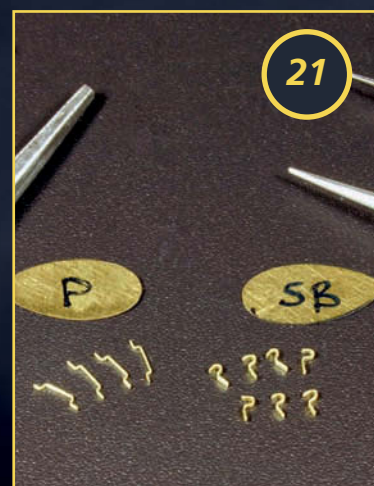
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Calamity No. 1

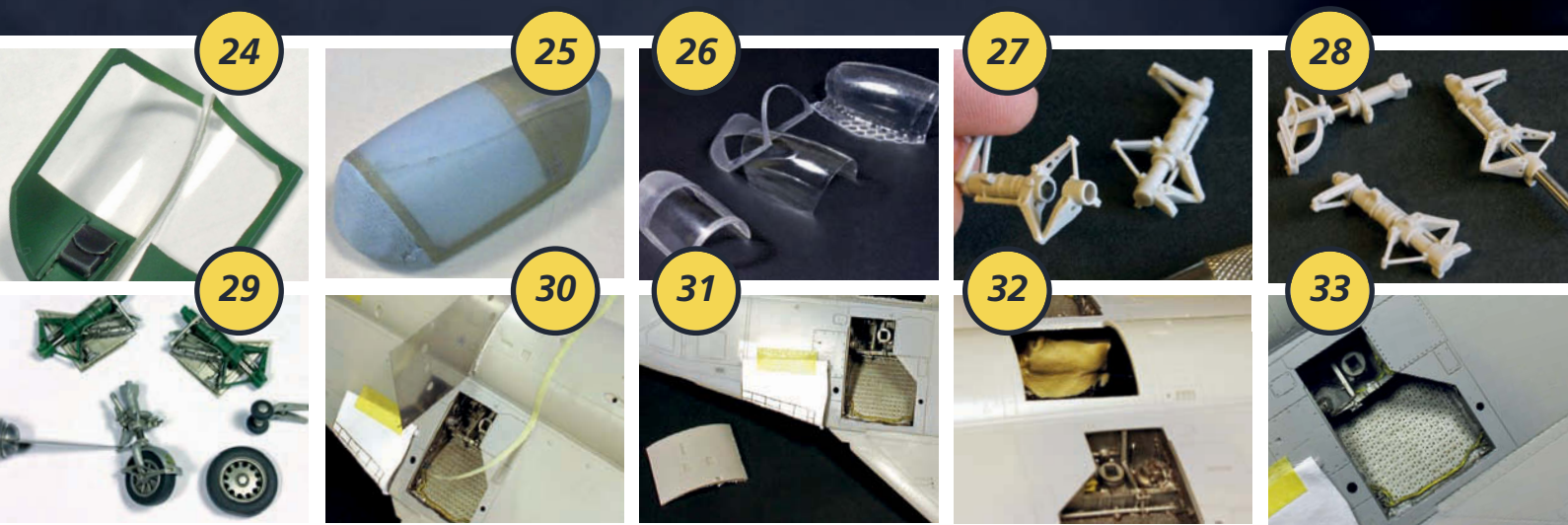
Following a chain of events too improbable to be happening at all, the main canopy ended up on the carpet, behind the wheel of my office chair, just before I pulled back to retrieve it. In the following pictures you can see the result of this sad action as well as the efforts to recover the situation. In short, I used the broken bits to form a master and vacuum-form a number of new shapes. Two of these were used to form outside and inside frames of the canopy and a third one for glazing itself (**Picture 24-26**). They were joined using Future – yes, Future is a very good bonder as well.

Canopy saved, I moved on to the landing gear. Here the legs were drilled out and reinforced with steel shafts, doubling as oleos. I detailed the undercarriage with hydraulic lines, electric cables and other small details based on my references. All was carefully painted and put together to wait for the final assembly (**Picture 27-29**).

Calamity no. 2

(Starting to think this kit doesn't want to be built)

At this point the airframe was fully assembled, sanded and panels restored and I started masking the model for airbrushing. I then noticed that one of the resin main wheel bays had come loose and was about to fall into the fuselage cavity. Being butt-jointed to the inside of the inner wing there was no possible way to secure it again from the outside of the finished airframe. Radical measures were needed... With a fine saw I made a rectangular opening in the ventral fuselage, just between the main wheel-bays. I tried to keep the cut as narrow and tidy as possible under the circumstances. After gaining access to the innards of the model I used epoxy putty to secure both main wheel-bays. Now the cut-out panel was put back in place, welded using liquid glue, and then puttied, sanded and primed (**Picture 30-33**).



Paint and decals

Thanks to kindness of Bob Sanchez of "Twobobs Aviation Graphics" I received some very detailed images of the airframe I was building, so I had an excellent guide on how to paint and weather the subject.

Combination of an old, weather-beaten airframe with patches of new paint and newly applied swordfish art really appealed to me. On the rudder there was residue of edge sealer from exercise markings in a form of five squares. These were present on both sides but the port was partially overpainted with the new spot of camouflage. Many other such idiosyncrasies are visible on the images and I had quite a bit of fun following them in the painting process (**Picture 34-36**).

Enamels of the Model Master range were used for the main camouflage and Alclad metallic paints for the bare metal sections. I didn't use pre-shading but rather very diluted camouflage colours applied in multiple layers and filters using other shades. When the Draken approached the look I was going for, I sprayed the coat of Future to seal the enamel paints and prepare the surface for decals and washes with artist oils.

Twobobs Decals are very well researched and produced. They include all markings and complete stenciling for the subject aircraft. Unlike my previous experience with this brand, the water transfers were not completely trouble free and resisted proper adhesion somewhat. To combat silvering I tried several softening solutions.





MicroSol proved effective in most cases, but in some critical areas I had to get forceful and use SolvaSet. When using strong solutions one has to be extra careful not to cause permanent damage to decals, or even underlaying paint. This is exactly what happened to the yellow "62" squadron number on the port side of the vertical tail. After 48 hours of drying time it was obvious that this marking was

damaged beyond repair. I had to remove it and repair the affected area. I then scanned the original number marking and used it as a pattern to cut out masks made out of Tamiya tape. Yellow hue was mixed to match the rest of the personalized markings and then sprayed on **(Picture 37-41).**



When all the decals were applied and dry I applied a wash with artist oils, changing the mix for each of the colours of the main camouflage. For the final matt coat I used Model Master Flat with few drops of MM Gloss added. I find that the flat on its own is too flat indeed.

I also tried to leave some of the areas glossier than other, to achieve more natural and varied look of the whole structure. A final assembly took place with further spot spraying of matt varnish to hide sheen of the super-glue in areas where it is hard to hide (undercarriage and bay doors, antennae and other small surface details) **(Picture 42).**

At last the model was all done. I've put it aside to let it fully cure, while I clean the bench, with a gratifying feeling of completion.





Calamity No. 3 – The final one

A loud boom brought the shards of window glass and wind and snow into the empty room. With the wind came barely audible laughter of the two men from the distance, lingered for one moment and then was gone.

As I was taking photographs of my newly finished model I remembered that bizarre dream. Was there any significance to it? Do I still remember it correctly or was it changing over time? Content with the pictures I made of the model resting on its wheels, I decided to take some more shots with the Saab belly-up.

I propped it on some jars of paint and repositioned my table lights. As I moved the arm of the light, the metal lamp-hood came loose and swiftly fell straight onto the model with the loud bang and cracking of plastic, followed by tumbling of small bits across the table.

I was frozen in a moment of disbelief. The landing gear was crushed to smithereens, bay doors broken off and warped, both external tanks fell apart, as was the small wind-turbine, but the fragile Pitot-tube was still attached and perfectly straight. In a fast succession initial panic turned into rage, rage into despair and finally to apathy... I left the plastic compost on the table for some days. I needed time to let the emotions cool down and then decide on what to do.

As I write this text efforts are being made to bring my Saab to its mint state again...





TAMIYA'S 1:32 *Mustang* **P-51D** *Modelled by Franck Oudin*

Did this aircraft change the course of the war? Not before the Mustang was coupled with the Rolls-Royce Merlin but then history changed and the Mustang as we know it changed the rules of air warfare in Europe and the Pacific theatre.

With its low fuel consumption and great range, the Mustang could easily stay with the big heavy's over the Reich and the B-29 over Japan to give protection to the bombers against the Luftwaffe and Japanese Air Force. These fighters remained in service until the end of the war and went to carry out operations in the Korean War.



The Tamiya kit:

For an exceptional fighter I needed an exceptional kit, and the Tamiya 1:32 scale release is one of them, the kit is moulded in grey - it contains 389 parts, 26 clear parts, 2 sets of photoetch, magnets, nuts and bolts, the details on the surface are just outstanding, the riveting is so fine, it can barely be seen, the kit is moulded with complexity as the fuselage is cut to be able to make an early or late type of Mustang one without tail finlet and two with, 3 possibilities of schemes are provided in the box. The level of detailing is really good from the box, but there is always room for improvement, and this time, the next step is to include some resin parts, which come from the Barracuda Studios range such as the cockpit side walls, the radio and battery set, the instrument panels, the ends of the external drop tanks, and I guess what is really essential to be changed on this kit are the tires. The rubber kit parts are just not good enough and must be replaced with resin alternatives.

For this article, I will not drag you in a long list of operations, so then you can easily follow the instructions, they are really clear, and there is absolutely no fitting issue, so nothing to worry about.



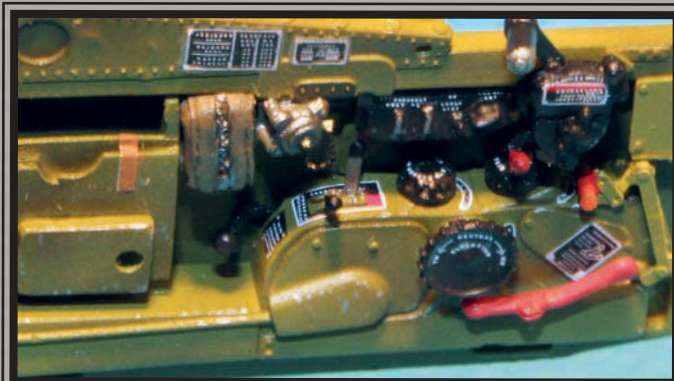
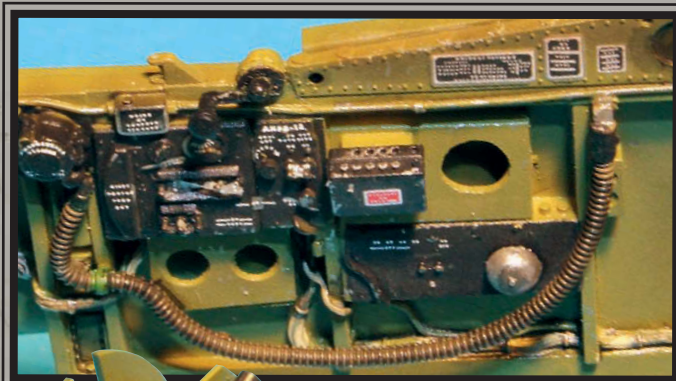
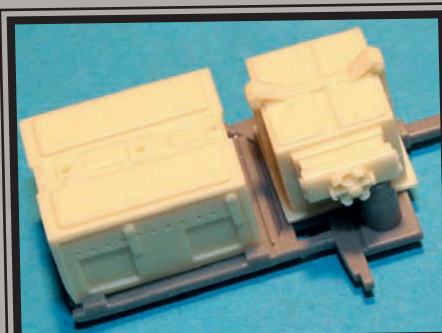
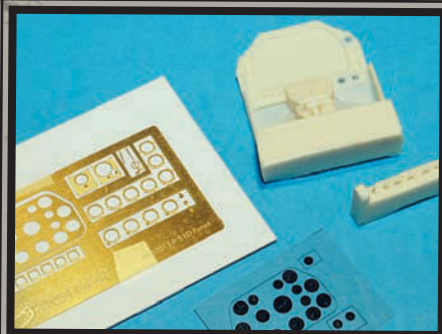
The Cockpit

The cockpit is really complete, with a choice of seat, instruments panels depending on your chosen aircraft, being one of the most visible parts of the kit I have decided to enhance the assembly with the resin parts from Barracuda, in the end only the framing kit parts will remain, the rest is replaced with the new resin parts which will not require any grinding on the side wall! Normally some adjustment is

required with resin parts but happily not this time!

Once complete, the side walls are painted with Gunze H-58 interior green, the wooden floor is painted in black, so is the fuel tank, the battery and the radio, some wiring is added to the radio, the seatbelts are from the box, painted in creamy colours and the buckles painted in silver, all the parts fit well

and in no time the cockpit is complete and can now be attached to the engine via the firewall, when you assemble these parts be very cautious and read the instructions as I made a mistake and used the Spitfire engine parts.....Then I was screwed, fortunately a friend supplied me his set of parts to start again!!



The Engine

The Packard-Merlin engine is painted in semi-gloss black, the fire wall and the oil tank are painted yellow zinc chromate, slightly weathered, but not too much as the US Air Force groundcrew had the time to take care of the machine, the engine is really well detailed but if you want to improve it, there is a lot of wiring to do and you will need good references to do so.

On with the build...

The rudder and ailerons are glued together, with the shaft support and all the moving surfaces. This can give more life to your model. The tail wheel bay is next; it is painted Gunze H-58 and is weathered before gluing all the parts together, this is then inserted inside the fuselage, the fit is perfect. The fuselage is complete once the front canopy is painted in black and glued in place. There was some controversy on the internet over the rivets found on the wings surface, but in my opinion they are so fine that it's not worth attempting to fill them and the surface detail of this kit is so nice it would be a shame to mess this up with putty.

The construction of the wings is very straightforward, I decided to replace the machine gun barrels with brass versions from Master and I had to modify them in order to install them properly, the ailerons and flaps are built and put in place, the wheel bay is also constructed and painted at this stage before being inserted and glued on the wings, once again the fit is just perfect. I did not include any other additional detail in this area, but if you wish there is plenty room for improvement. Once all the parts are put in place, we can glue the wings together; a small amount of sanding is done to remove any seam lines.





Main Assembly

The aircraft can now be assembled, the fit between the wing and fuselage is perfect and a small amount of glue will be necessary to keep these elements together. Cleaning up of the joint is necessary to remove any glue traces or stains, especially if you decide to do a NMF finish.

As the aircraft starts to take shape, the next question is whether or not to leave the cowlings open, if you do and depend on the chosen scheme make sure that the 4 parts cowlings are protected to stop paint ingress, but if like me you decide to close it

for good, well simply put the parts in place and gently run some glue along the panels the fit is just fantastic for such thin parts, the plane is now ready for the painting stage, and put aside to work on the remaining details.

The landing gear is reinforced with small iron shaft inserted inside the legs, great details are added with break lines, which can be glued once painted, the wheel must be replaced as Tamiya only offer some very ugly rubber tires, so in this case Barracuda resin come to the rescue, with no less that

4 different tires profiles. They can be used in conjunction with the hubs from the kit.

The propeller is really well done with a 6 part assembly, which can give you the option to present you to model without the nose cone if you wish. Only one type of propeller is provided in the kit and this is Hamilton standard.

You have the choice to equip your model with external tank of 75 and 108 gallons, the later version is great, but the rib of the nose cone are not pronounced enough so both end are replaced with resin plugs form Barracuda.

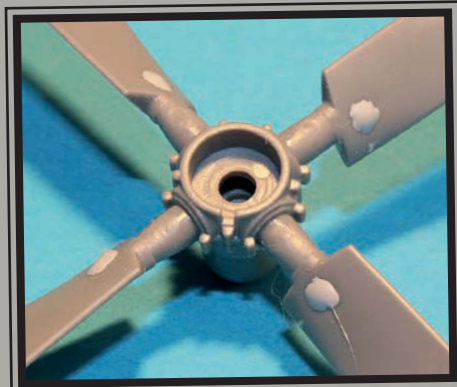
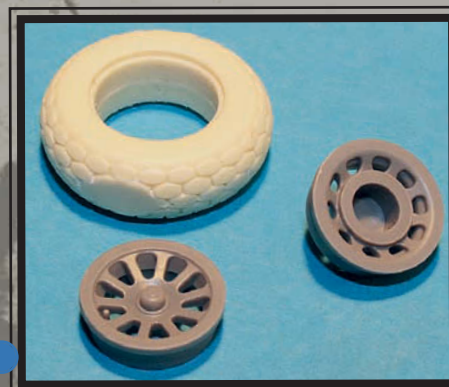
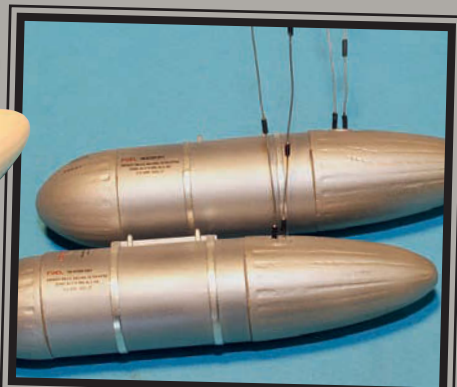
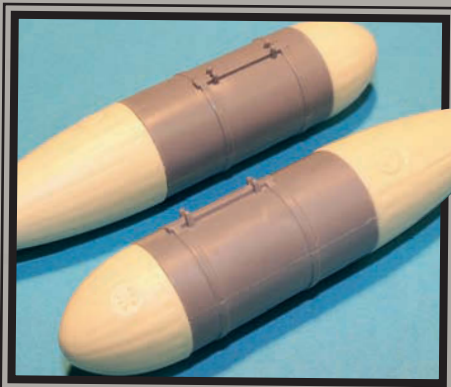
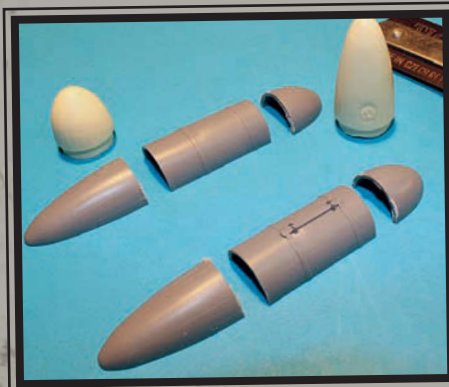
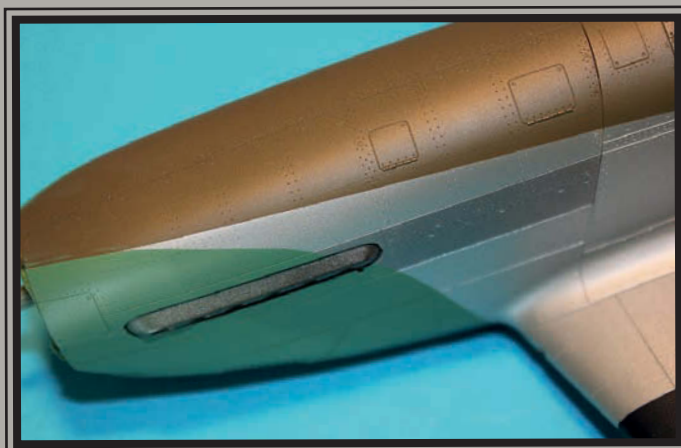


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Painting the Steed



Having all the parts ready painted and put aside, it's now time to think about a scheme for this elegant plane.

There were so many of these planes engaged in different theatre of operations, the choice of scheme from the box are really nice, but I wanted to do something else so while surfing the net I found a nice decals sheet from Life like decals with 4 nice Mustang 3 based in Europe and one in the Pacific, so I choose one from the 359th Fighter group flown by Raymond S. Wetmore and based in East Wretham, Norfolk in late 1944.

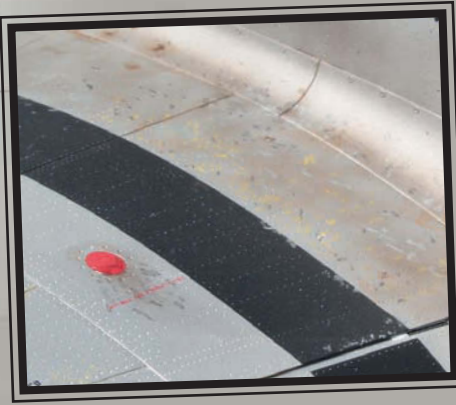
Having chosen to do a NMF finish and wanted to avoid a big 'toy' effect, as I have seen sometimes on other models, after looking at a lot of pictures of war-weary Mustangs I have noticed that these planes were suffering a lot from the natural elements and were not shiny at all, which suits me well as I don't like working with anything but acrylics colours, so I prepared

the model by masking all the areas, such as the cockpit, the tail wheel bay, the main wheel bay can easily be covered with the part of the closed landing gears doors of the kit. The model is now polished with a cloth and a very fine Micromesh pad, and then handled with Nitrile gloves.

To paint the main colours I have chosen Tamiya X-32 Titanium silver, it does look a bit less shiny than some of the Alclad paints but looks closer to reality to me and will be easier to work and mask over it, once painted the model is gently polished, the antiglare panel is masked and painted with Gunze H-53 Olive drab, then the black identification lines are masked and painted, with a mix of Gunze H-2 gloss black and Gunze H-77 tire black, The following operation was to paint the green nose which was the trade mark of the 359th Fighter group, to do so and after some serious research it appears that there was no real definitive colours for these planes as the paint was provided to the group by

the British and the green shades would have varied from a lot of paint to another, it very visible on colour pictures of these planes that can easily be found on the net. I choose Gunze-H319 light green, which seems to match the colours alright to me, so after a careful masking sessions the green is applied, then it's turn for the exhaust stacks to be painted, with Gunze Burnt Metal H-76, the blue rudder is painted with Gunze H-6 Blue and reattached to the model.

To break a bit the monochrome aluminium panels, I masked some of the fuselage panels and sprayed them with a mix of Tamiya Titanium silver with a drop of light grey, the same for the ailerons on the wings but this time with a drop of white, the model is then gloss coated with Gunze H-30, and the decals are applied they are from a Life like decals sheet 32-014 North American P-51 Pt1. With a little setting solution, the operation was quickly done, another coat of gloss and it's time for the weathering session to start.



Final Touches

Most of these aircraft got a lot of attention from the ground crew in the USAF bases in the UK, but pictures show some signs of wear and oxidation on the fuselage and mud on the tires, I started with a light wash in the panels lines, then with a very diluted black brown mix I sprayed some the panels lines and wing root, but with a light hand as these planes were rather clean, with a silver and graphite pencils I added some scuff marks and with a little diluted water based colours and a piece of foam, some dirty walks marks on the top wing. The exhausts stains are sprayed in very thin colours gradually built up until you are convinced.

The wheel and landing gear will received a light spray of desert sand colours and some dry pigments; the same treatment is applied to the bottom of the landing gear doors, finally some oil stains are applied with a fine brush and some diluted black ink.

It's now time to had all the remaining parts on the model, all fitted so well that in no time the model is completed in the front of you. I added antennas wire made from E-Z line with a little spring inside the canopy, and fuel lines from the external tank are made from a thin wire and electrical wire to simulate the rubber connection all these parts are firmly attached with superglue.





To sum-up...

For the last three months i really had a ball building this model, the fit is so good the not filler was required at all, Tamiya does excel in the kit making industry and the Mustang is the perfect example, the quality of the moulding of some parts is just magnificent, the complete packaging is a real treat for us lucky airplane modellers. With a vast choice of markings available the choice is nearly endless, to make of wonderful replica of the plane which changed the air warfare during WWII. So go on treat yourself and get one of these Mustangs...you will not regret it!

Special thanks to Roy Sutherland from Barracuda resins for providing all the references to upgrade this model, Piotr Czerkasow from Master Poland for sending me the brass resin barrel, Keishiro Nagao from Life like decals for sending me the decals sheet, and as always Bob Brown from MDC for providing all the Gunze products to build and paint this model.

Barracudas

BR32014 Cockpit upgrade
BR32012 Cockpit sidewalls
BR32016 Paper drop tanks
BR32031 octagonal tread tires
BC32010 Cockpit stencils and placards

Master from Poland

AM-32-001 .50 Browning M2 Aircraft

Life Like Decals

32-014 North American P-51 Mustang Pt 1

Gunze

H-58 Interior green H-77 Tires black
H-53 Olive drab H-6 Blue H-319 light green
H-414 Yellow





P-51
Mustang

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First flown on 18 December 1940, the Curtiss SB2C Helldiver had been conceived as a faster, longer-ranged replacement for the Douglas SBD. Production aircraft deliveries started in December 1942. From the outset, the SB2C failed to live up to its initial promises by proving to have no greater range or bomb load than the Dauntless. Even worse for a dive bomber, it suffered from pitch instability, along with structural weakness during its early days. Rejected by the British, the US Navy decided to stay with its development, eventually ordering 6,649 examples. The machine seen here displays the wear and tear aspects of carrier life.

US NAVY AIRCRAFT, THEIR LIVERIES AND MARKINGS

PART TWO

BY HUGH W. COWIN



Above This image of three Boeing F4B-4s harks back to the fighter markings and finish the mid-1930s, but actually dates from 1941, when these machines were flying as advanced trainers. This instance of Navy aircraft retaining their original livery is far from unique, with examples of this practice occurring across the years. (US Navy)

From Neutrality to Havoc at Pearl Harbor, September 1939 to December 1941

Four days after Germany invaded Poland, President Franklin D. Roosevelt found it necessary to demonstrate America's preparedness to defend itself. On 5 September 1939, the US State Department announced that it was establishing Neutrality Patrols covering the waters off its east coast down to the Caribbean out to a distance of 300 nautical miles. Similar patrols would be established over the waters surrounding US possessions in the Pacific, including the Philippines and Guam. This would, by the nature of the task, mainly involve the Navy, its ships and aircraft.

In March 1941, in order to protect US-UK shipping routes, the Neutrality zone was extended northwards to New Foundland. Nothing was changed in terms of colour finishes or markings of Navy and Marine aircraft until March 1940. Henceforth front-line types would adopt a low-visibility finish, consisting of medium blue upper surfaces merging with light grey below. Another change required the national star had to be displayed on each side of the fuselage of all

participating aircraft. As the order had no effect on any other markings carried on the fuselage this meant that in some cases, the national star was worn forward – in one instance on the engine cowlings of Grumman F4F-3 of VF-72, based in the Virgin Islands. The same order required the removal of the nation star from lower left and upper right wings, applicable to all US military and naval aircraft.

In November 1941, two other changes of relevance here took place. First, it was decreed that the rudders of all Navy and Marine combat and patrol aircraft would carry seven red and six white horizontal stripes. The other event was the official decision to place the US Coast Guard, formerly part of the US Treasury, under the direct control of the US Navy.

Before continuing, it must be said that much photographic exists to show that not all of these 1941 livery change requirements were executed either quickly or fully. Such lapses were particularly apparent on Marine aircraft. All of these 1940 and '41 changes had been brought about as a result of the war in Europe, something that was having a mounting influence of the thinking of the



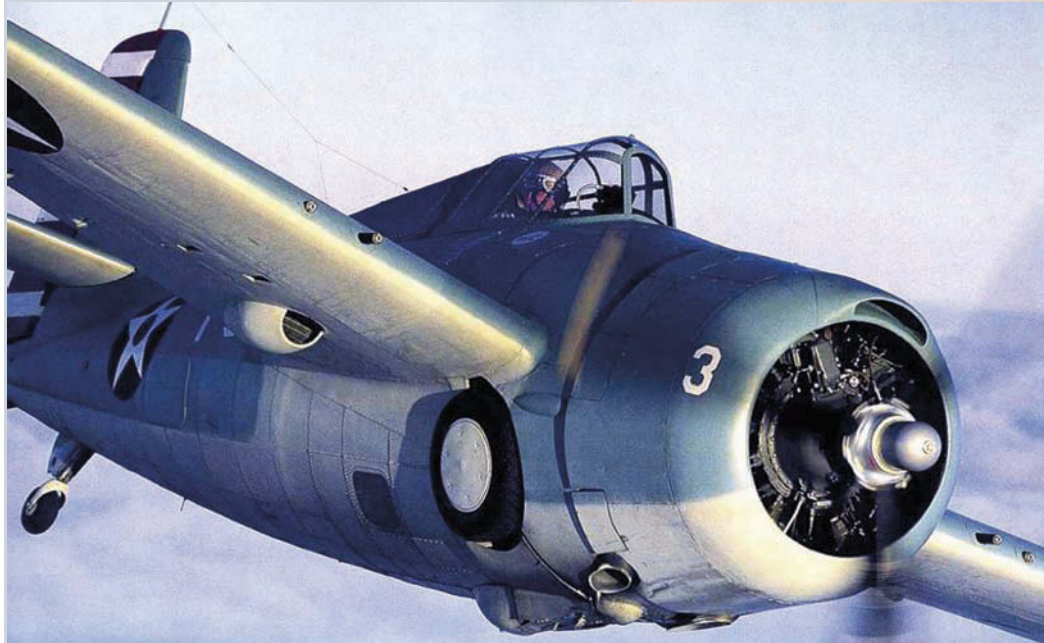
Above This parked Grumman JRF-1 Goose carries the national star insignia forward, along with the post-February 1941 upper medium blue/lower light grey scheme. Grumman's G.21 Goose proved popular with its numerous users that included the US Navy, US Marines, US Coast Guard, Royal Air Force and Royal Navy. Overall production totalled 345. (Grumman)



Above The prototype Curtiss SO3C-1 Seamew, first flown on 6 October 1939, seen here in its landplane form and complete in post-November 1941 livery. Meant to succeed Curtiss's SOC Seagull biplane, the Seamew entered production in July 1942 for use by both the US and Royal Navies. Failing to live up to early promises, the Seamew was rejected by the British and withdrawn from US Navy service in early 1944 - ironically, to be replaced by refurbished SOC Seagulls. In all, 456 SO3C were produced. (US Navy)



Left Extremely contrasting views of pre- and post-Neutrality era markings show VB-3's Section 5 aloft in their Vought SB2U-1 Vindicators on 23 May 1939, compared with an SB2U of VMSB-131, redesignated from VMS-1 on 1 July 1941. The 1939 image raises a further point concerning the use of squadron emblems like the 'High Hat' emblem seen here. These, it must be noted, moved from one squadron to another as units were disbanded and reformed. Adopted first as the emblem of VF-1 in July 1927, the 'High Hat' passed on to VF-2, VB-3, VB-4 and VS-41. (US Navy)



Above Pictured in late November 1941, a few days prior to the Japanese air strike on Pearl Harbor, these Grumman F4F-3As Wildcats of VF-111 act out their role as the enemy or red forces, distinguished by the red crosses, on joint Army/Navy exercises in Louisiana. Interestingly, both this and the preceding colour image of the VMSB-131 Vindicator show the widespread use of a lighter shade than the medium blue/grey stipulated (Cowin Collection)

Left Typical of the numerous liveries found in service during the first few months of 1942, this Grumman F4F-3 Wildcat wears a distinct 3-tone, 2-colour finish, along with tail stripes. (US Navy)



Above Unloved and unwanted by the front-line pilots, the Brewster SB2A-4 Buccaneer seen here was pressed into service with Florida-based VS-5 as an advanced trainer. Of clean appearance, it conforms exactly to the markings stipulated for early 1942 – a luxury not afforded the more pressed active units.



Washington politicians, and the top military/naval planners alike. Indeed, the conflict across the Atlantic had materially shifted the Navy's major operational attention eastwards, away from the Pacific. At this time relations between the US and Japan over access to both trade and the material wealth of the Asiatic region had been deteriorating for more than a decade. During 1941, relations between the two countries became almost non-existent. War between the two was no longer a probability, it was rapidly emerging as inevitable.

The Japanese, not unaware of this, took the opportunity to mount a telling strategic strike against their mighty opponent. On 7 December 1941, aircraft from a Japanese carrier task group struck Pearl Harbor and almost achieved their aim, thwarted only by the absence of the Pacific Fleet's three US carriers out at sea.



Above First flown on 29 May 1940, Vought's XF4U-1 was one of the fastest fighters then extant, but as with most prototypes, it required development. Not until October 1942 were the first production Corsairs ready for delivery and even then limited to land-based operations only. Thus, all early F4Us went to the Marines, entering combat in February 1943. Only in April 1944 did the Navy release the type for full carrier-going duty. Because of its delayed carrier-going operational deployment, the Corsair was somewhat overshadowed by Grumman's F6F Hellcat during World War 2, but remained in production post war, going on to serve in the Korean conflict of the early 1950s. These images depict a F4U-1 in its standard factory-applied 2-colour finish being given its pre-delivery testing in late 1942, while the righthand one shows another F4U-1 of the famed VF-17 'Jolly Rogers' hooking on USS Bunker Hill in late 1943. Besides the national insignia, yet to have the white bars added, this 3-colour Corsair only carries two other sets of marks, those of '17' on its fuselage, along with the Jolly Roger emblem on its nose. Note; the '17' refers to its being the last aircraft of the squadron's Section 6 and is only a coincidence in being the same as the unit's number. (both US Navy



This Consolidated PBY-5A Catalina patrolling bleak Aleutian waters in late 1942. The '37' on the fuselage is the only unit marking evident. This minimalist approach was adopted so as not to reveal any useful Order of Battle information. (US Navy)



From Pearl Harbor to Tokyo Bay, December 1941 to September 1945

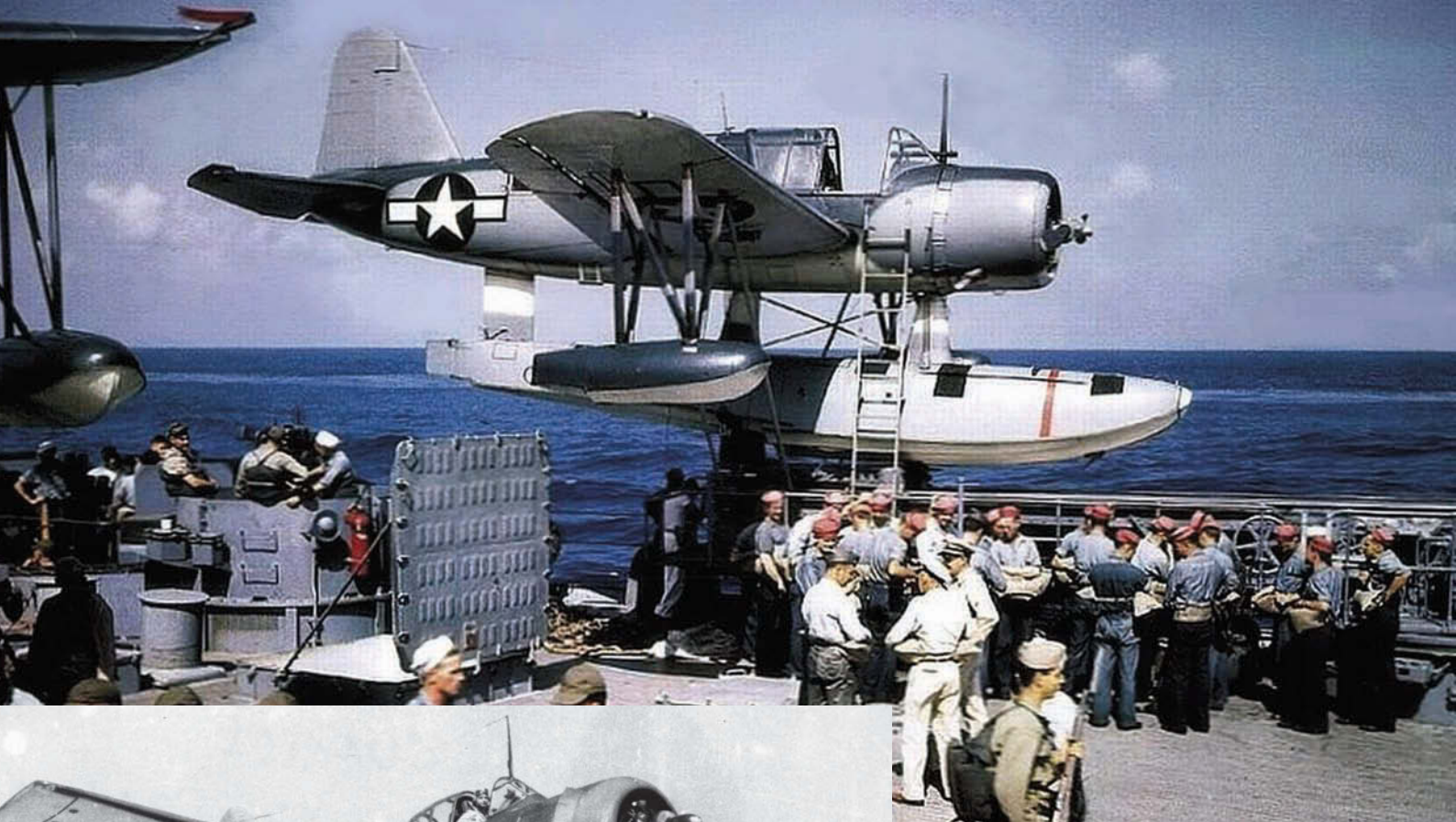
There is a long-standing expression referring to the 'Fog of War' and the chaos it creates. This certainly applies to the variations in the markings of Navy and Marine aircraft that emerged during most of the year that followed the Japanese attack on Pearl Harbor. This confusion was attributable both to bureaucracy and hapstance. For example in May 1942, Officialdom changed the national star insignia by deleting its red centre to avoid confusion with the red disc national markings on Japanese aircraft. The red and white rudder stripes introduced on Navy, Marine and Coast Guard aircraft in January, were rescinded in May. The more haphazard aspects arose mainly from the very mobile nature of the Pacific war. During the first few months, in tactical terms, US forces, both Army and Navy, found themselves in headlong retreat ever southwards towards Australia under the impetus of Japan's early successes.

Strategically, the retreat emphasised the need to greatly bolster the US forces in the Pacific. As the region comprised of many islands scattered over a great expanse of water, such a task would, necessarily, mainly involve the Navy and Marines. Initially, there was a scramble to switch everything that could be spared from the Atlantic theatre of operations westward to counter the very real threat of nearby Japanese forces invading Northern Australia.

Having the men, carriers, aircraft and ships in the right place at the right time was the pressing priority, whereas, just what colours and markings they carried was of very little concern. Unlike in World War 1, where their overseas operations were confined to the Europe and very small parts of the Atlantic, Navy and Marines operations spanned both the Atlantic and Pacific in World War 2. From the beginning of 1942, for reasons already set out, their main deployments would be in the Pacific - a factor likely to distract attention from what they were achieving,

fighting a very different kind of warfare, often in very different climatic conditions, over the Atlantic.

Though not as apparent as the land and naval defeats initially suffered, one of the largest and ongoing threats facing the British, from September 1939 and the US, from December 1941, stemmed from U-Boat operations across the Atlantic. Both the US and Royal Navy soon realised that they were having to divert far too many of their scarce resources in warships and men to counter the U-Boat menace. Initially, while Britain stood alone, the Royal Air Force's Coastal Command shared responsibility with the Royal Navy for developing anti-submarine warfare (ASW) tactics, but were always limited by the quantities and endurance of the aircraft available to them. The early ASW problem centred on the relatively small difference in speed between the surface warship and the submarine. To catch a submarine, which could rapidly disappear beneath the surface, required an attacker having a



Above & left This battleship-borne Vought OS2U Kingfisher wears a 3-colour finish with post-July 1943 national insignia. Kingfishers were the standard battleship catapult scout until the coming of the last of this breed, Curtiss's fighter-like single seat SC-1 Seahawk. The first of three prototype XSC-1s made its maiden flight on 16 February 1944, with production deliveries starting in October of that year, only 66 SC-1s and 10 of the slightly more powerful SC-2 had been delivered by the end of the war. Fondly nicknamed 'The Quarter Deck Messerschmitt', Seahawks continued to operate from US battleship until late 1949, being replaced by helicopters. (both US Navy)



Douglas's stalwart SBD Dauntless remained the backbone of both Navy and Marine carrier and land-based squadrons throughout America's wartime years. This despite the appearance of the later Curtiss SB2C Helldiver.

much larger speed advantage, such as that provided by aircraft. Only after the US Navy became involved, backed by the manufacturing powerhouse of US industry, did the ASW fortunes of both nations begin to turn in their favour and even this took time, plus considerable effort. The US Navy's contribution to the development of ASW was not only massive, its was also pioneering. They attacked the problem from two angles, both of which required innovative thinking.

Accepting the limitations of existing sensor technology, Navy planners recognised the need to greatly extend the range of their patrol squadron fleet, then largely comprised of flying boats. By 1943, the Navy were supplementing their flying boat strength with long-ranged, land-based Consolidated PB4Y-1 Liberators and a

Above Right. The SBDs lined up on a light carrier flight deck are about to take part in Operation Torch, the November 1942 landings in North West Africa. Clearly visible are the special-to-operation yellow bands surrounding the fuselage national insignia. The absence of these yellow outlines on the wing insignia is also obvious. (US Navy)

Above Right. Flown for the first time on 7 August 1941, Grumman's TBF Avenger's operational debut was in early June 1942, when six flew off Midway Island. Subsequently, 9,836 were to be built by Grumman and Eastern Aircraft, with 984 of these going primarily to the Royal Navy, along with other British Commonwealth services. Ironically, the last TBF in service, retired in 1962, had served with the Japanese Maritime Self-Defence Force. The two Navy Avengers seen here wearing the 3-colour scheme are rejoining USS Belleau Wood and carry carrier air group markings introduced in early 1944. (US Navy)



Above Right. No doubt impressed by the April 1942 Doolittle Tokyo Raid in which US Army Air Force North American B-25 Mitchells flew off the carrier USS Hornet, the Navy also ordered the aircraft as the PBJ Mitchell. Ironically, PBJs were never operated from carriers, being used almost exclusively by seven land-based Marine squadrons, of which VMB-413 was the first to be so equipped in late 1943. In all, the Navy bought several variants of the PBJ, totalling 706 aircraft, including the 75mm cannon armed version seen here. (US Navy)

Above Right. Two signs of the changing times are encapsulated in this image of the first prototype Ryan XFR-1 Fireball, aloft on its 25 June 1944 maiden flight. While its Wright R-1820 radial is obvious, the General Electric J31 jet engine positioned aft of the cockpit is less so. The Fireball, of which 66 were built would become the world's first and only compound-propulsion fighter to enter production. The other aspect of note is the application of the recently introduced overall midnight blue finish. (US Navy)



Above Right. In July 1942, the Navy entered into agreement with the Army Air Force to share in the production of Consolidated B-24 Liberators, their version being designated PB4Y-1 of which they would ultimately acquire 977, plus a small number of the transport version as RY-1s and RY-2s. The PB4Y-1s were mainly employed as long ranged ASW aircraft across the Atlantic, or for long range reconnaissance or bombing in the Pacific. Development of a variant more suited to naval use commenced in May 1943, leading to the Consolidated PB4Y-2 Privateer, seen here. First flown on 20 September 1943, deliveries of production Privateers started in March 1944. While 736 were delivered in all, both the Navy and Marines made little use of the PB4Y-2 during the war. However, one Navy squadron, VPB-109, did set a precedent by using its Privateers to launch ASM-N-2 Bat radar-guided, glide bombs against Japanese shipping in Borneo on 23 April 1945 - the US Navy's first ever guided missile attack. (both US Navy)



Below The '82-F-20' markings on the nearest Vought F4U-1D visible in this 1944 image are those representing the recent introduction of the Carrier Air Group, or CAG, in this case CAG-82, with the machine being the 20th fighter on its strength. The other recent development is the adoption of the overall midnight blue finish, visible underwing. (US Navy)

range of slow, but long-duration semi-dirigible 'blimps'. The introduction of these two very diverse weapons effective closed the Atlantic coverage gap after 1942, much to the detriment of roving U-Boat packs. The other US Navy development in this area was around deploying 'hunter/killer' teams from the many

available smaller aircraft carriers. Typically, because of existing warload-carrying limitations, these would comprise of two Grumman TBF Avengers, one carrying the sensors to detect the submarine, while the other carried the depth charges with which to kill it.

As the climatic conditions experienced in





Below From early 1944 on, most Navy and Marine transports were delivered and flown in their natural metal finishes, as with this Navy R4D and Curtiss-Wright R5C-1 of the Marines (both US Navy)



Taxying out to patrol Atlantic waters, this Martin PBM-5 Mariner wears the light grey upper and white lower surface finish shared with aircraft of the RAF's Coastal Command from late 1944 to the end of the war. In contrast, Mariners serving in the Pacific wore a much darker blue grey virtually overall, before adopting the requisite overall midnight blue from March 1944 onwards. (US Navy)



Above Photographed at Corpus Christi in 1943, this Boeing Stearman N2S-2 retains the long established overall 'Yellow Peril' trainer finish, while the North American SNJ has been delivered with a part natural metal finish and

marks dating it to early 1943. The trend of accepting trainers with more and more all-metal finishes continued throughout the war and on into the 1950s. (both US Navy)

the North Atlantic, where much of the ASW effort was focussed, were hostile for more of the time than anywhere else, aircraft markings and finishes were adopted to better blend into this environment. In essence, by the end of 1943, all Royal Air Force and US Navy dedicated ASW aircraft wore a finish of light blue grey upper surfaces and white lower surfaces, regardless of whether they were patrol 'boats, carrierborne or land-based.

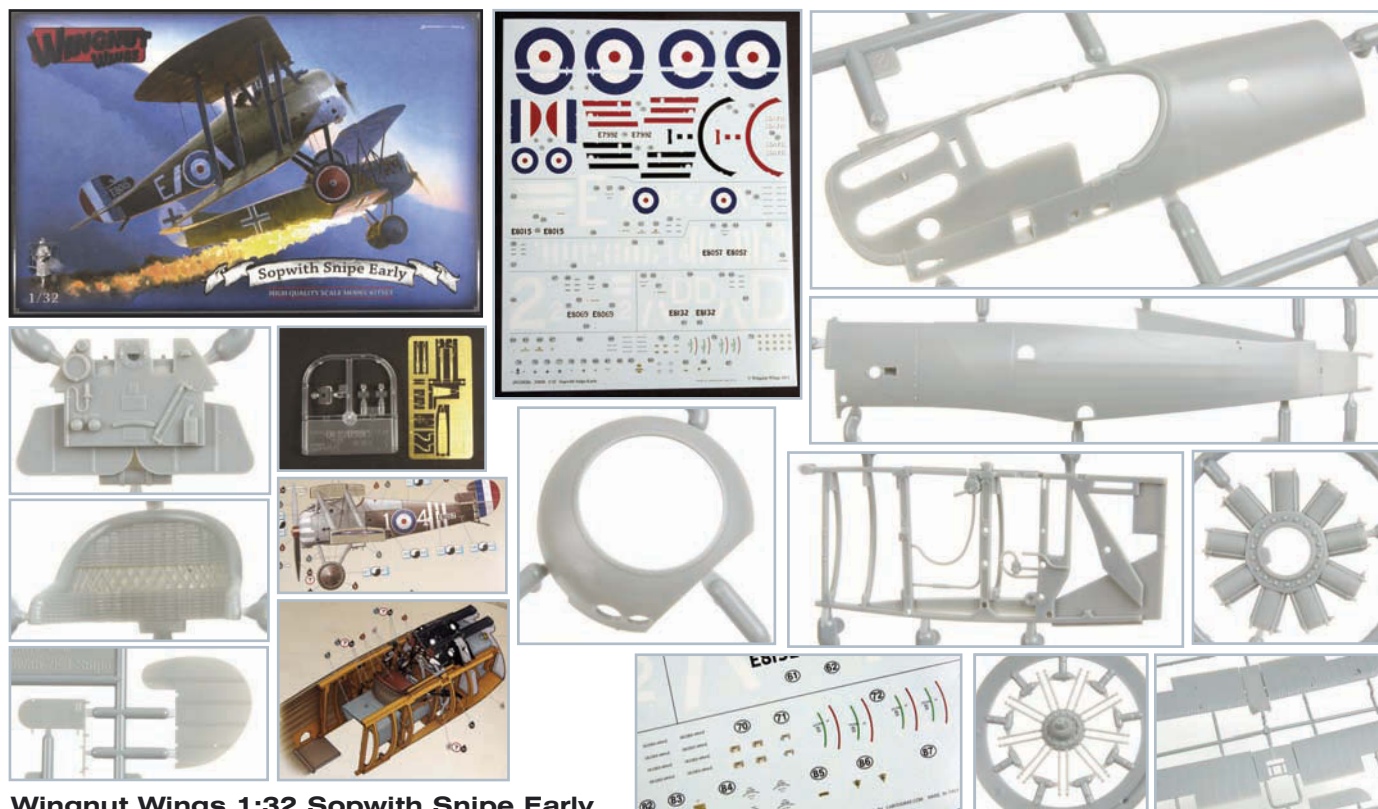
The case of special-to-operational-theatre markings is best illustrated by those applied to US Navy, Army and other Allied

aircraft taking part in Operation Torch, the North Western Africa landings that took place in November 1942. In this campaign, all participating Allied aircraft were to wear a thin yellow band outlining their normal fuselage national insignia. The Navy, Marine and Coast Guard adopted a similar surround for their national insignia in 1943, which at the same time was modified to incorporate two white rectangles either side of the encircled star. Initially outlined in red between July and August, the colour changed to blue from September. The addition of the white bars also affected US

Army Air Force aircraft.

In March 1944, the Navy stipulated that henceforth, all Navy and Marine front-line aircraft would be given an overall midnight blue finish, with markings in white. This was to remain the standard until 1955. The one exception to this was the temporary adoption of yellow for Reserve unit markings immediately post-war. The application of this overall dark blue finish never applied to transport and training aircraft, most of which retained their natural finishes.

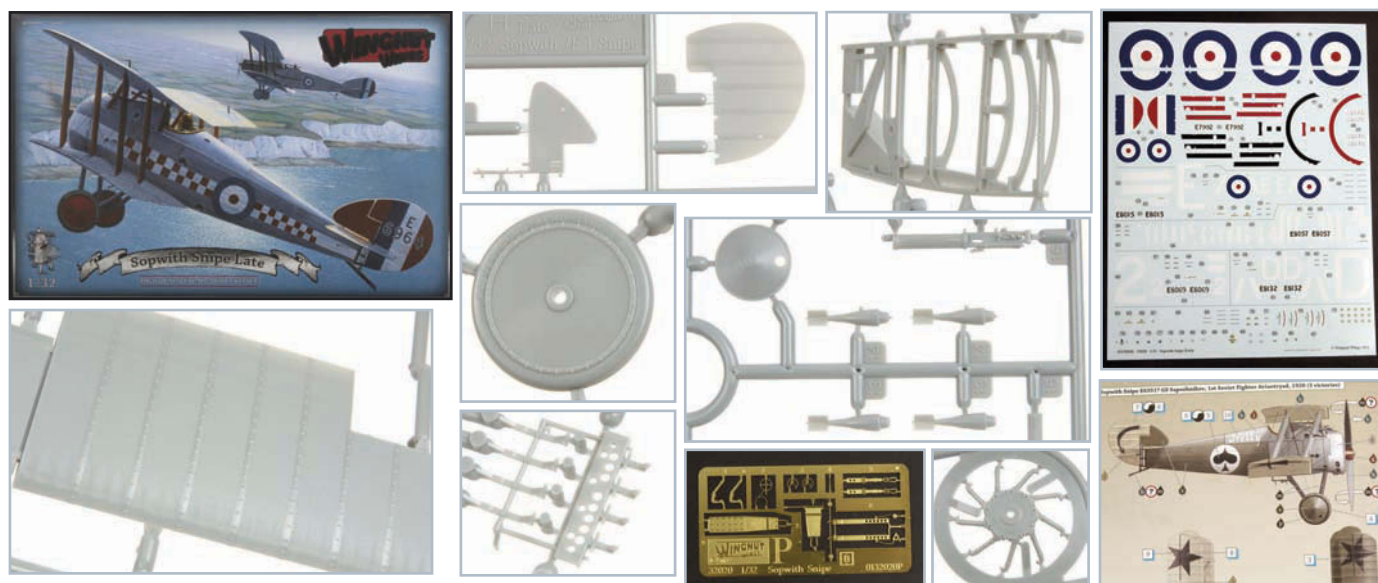
AIR ORN new releases



Wingnut Wings 1:32 Sopwith Snipe Early

New Wingnuts kits are coming thick and fast just now and the latest are two versions of the Sopwith Snipe. This late war design just scraped into action and saw post war service too and these are covered in the Late kit. Its business as usual here with the familiar mid grey sprues which immediately impress and they are supported by the usual top quality instruction booklet, photoetched fret and Cartograf decal sheet. the Snipe is quite a compact design and consequently there are just three big sprues in this kit with four smaller ones, but the quality of moulding is again as good as it gets. The cockpit tub is beautifully detailed with cleverly moulded curved ribs and coloured instructions are there to guide you along with photos of a reproduction aircraft. Its all there apart from the bracing wires and control cables and if you wish to add these there are diagrams for these too. The Bentley radial engine

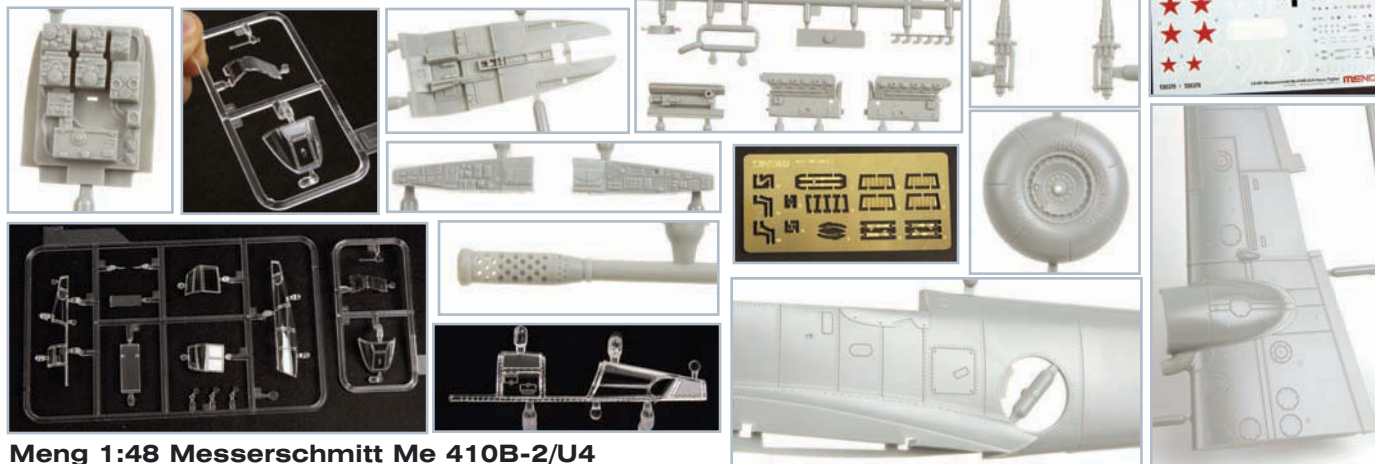
is also accurately replicated and really only requires some sympathetic painting with the instructions again showing the real thing as a guide. Wing rib tape detail is excellent and the location points for the struts are differently shaped to avoid any accidental mix ups during assembly, another nice touch! The Snipe happily has less rigging than many of the British designs so this is not a daunting prospect and there are guides as with all the Wingnuts kits to help you. The kit also includes a bomb rack and optional bomb load. Five schemes are provided including a colourful flying school example. The decals are as usual quite superb! Along with the markings for the five schemes they provide all the instrument dials and markings for the bombs. Another glorious addition to the Wingnut Wings range and as we have said before, some day all kits will be like this!



Wingnut Wings 1:32 Sopwith Snipe Late

It is no surprise that the Late Snipe differs very little from the early that we have just looked at. The main differences are in the four point Sutton safety harness fitted to Post-War aircraft and the modified larger ailerons and a modified rudder design. The other difference of course is the five sets of markings and if you are looking for something a bit different the captured example pressed into Soviet service will appeal with its ace of spades markings and black stars. There are two colourful all over silver

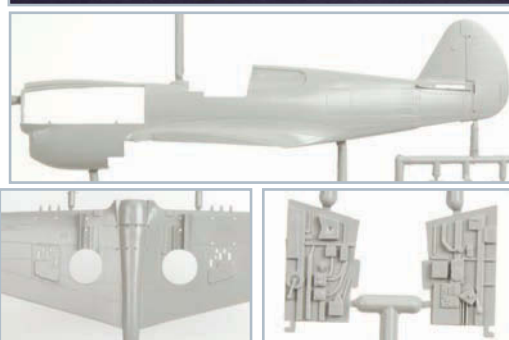
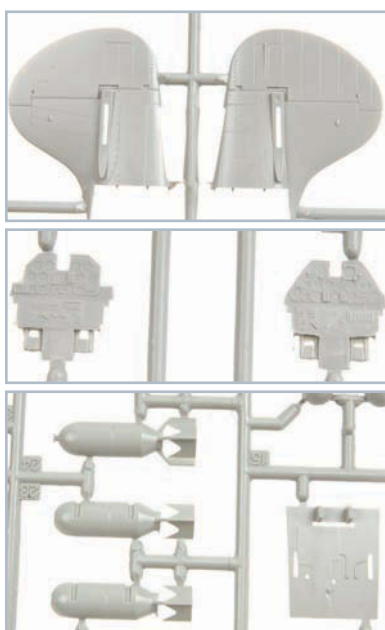
aircraft one of which is shown on the box art, and two immediately post war PC10 over clear doped linen schemes. The huge decal sheet which fills the box is printed superbly by Cartograf and provides all the bits you need including those tricky checkers and chevrons from the silver schemes. I can't decide whether the snipe looks best in the silver finish or the war time colours. Probably means building one of each - that's going to be my excuse anyway!



Meng 1:48 Messerschmitt Me 410B-2/U4

Meng continue to impress with their new releases and I am sure many Luftwaffe fans will be pleased to see them tackle the Me 410 as a new state of the art kit has been long overdue! Meng have gone for the impressive long-barrelled 5cm cannon version and first impressions are very favourable with Meng's usual high quality moulding, a part colour instruction booklet and photoetched fret. Assembly begins with a detailed nose weapons bay for the 20mm cannons with ammunition feed chutes. The cockpit looks excellent with photoetched seatbelts, crisply moulded instrument panels and radio gear, the level of detail is right up there for a kit in this scale. There are however no decals provided for the instrument dials. The rearward firing remote MGs are designed to be articulated so that they can be positioned as required and the controls for the gun are nicely replicated too. The 5cm BK5 cannon features a superb perforated muzzle brake and the gun breech and ammo feeds are provided too. The fuselage mouldings are cracking with good panel line and partial rivet detail

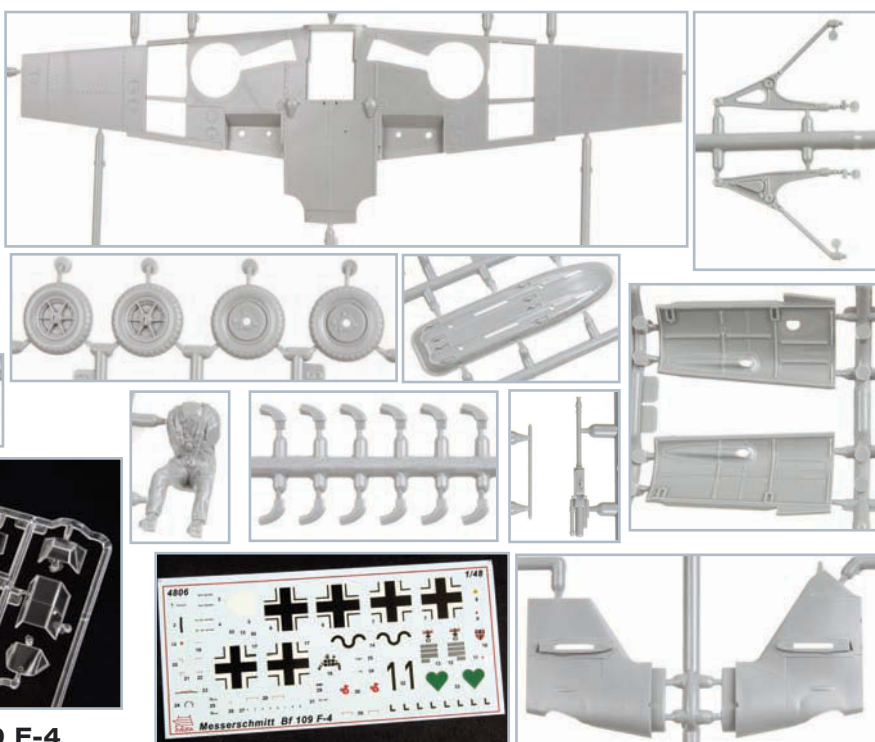
which strangely seems to depict only the vertical rivets along the panel lines, horizontal rivet detail being limited. The same approach is also used for the wings. The canopy is moulded in several parts with the internal framework also moulded. The kit provides details of painting the internal frame which will require careful masking. The access panels for the crew are moulded separately to show off the detailed cockpits. A pair of well detailed engines is also included with separate cowlings and there are photoetched radiator grilles. Ideal if you like to expose the engines on your kits. Undercarriage is good with unweighted tires complete with manufacturer's names. Only two schemes are provided which is a little disappointing and one of these is for a captured aircraft in Russian markings. The decal sheet is printed by Cartograf so the quality is excellent and tail swastikas are provided. Plenty to like here and very little to complain about which is always good and hopefully we might see a few further variants of the 410 from Meng too.



Italeri 1:48 P-40E/K Kittyhawk

Italeri offer a re-box of the old AMT kit with one of their 'Super Decals Sheet'. A basic kit with decent surface detail is moulded in pale grey with the tooling showing it's age with a fair amount of flash throughout, nothing that would cause much trouble to remove and a few imperfections in the surfaces due to shrinks. The cockpit has separate side wall detail and an option of instrument facias for both versions, a decent basis for extra work should you wish to improve on the finesse. The long and short tail

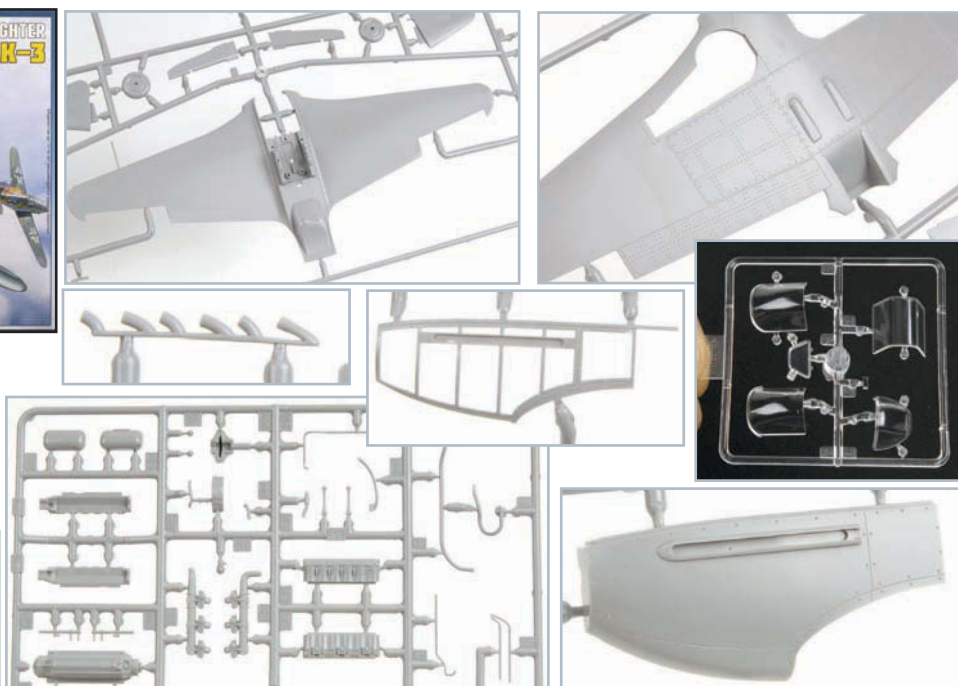
options are provided but some surgery is required of the fuselage halves so be prepared for some filling and scribing to produce a K version. The decal sheet by Cartograf is indeed 'super' containing six options with diverse paint schemes, three USAAC versions, one RAF and one RCAF. Not a bad older tooling with recessed panel lines and good detail but some old fashioned modelling tweaks will improve it no end.



Zvezda 1:48 Messerschmitt Bf109 F-4

Zvezda's highly acclaimed 109 has a welcome re-vamp as the F-4 version, the original kit is widely regarded as one of the most accurate and detailed 109s ever available and thankfully we've served more of the same with a handful of original parts unused and a new sprue. The new sprue holds the 'F-4' tail section, prop blades, nose cowl, stores and various specific details all to the superb standards as before in grey styrene which is flash-free and holds the most delicate and beautiful detail. No doubt this is not a quick build that could be thrown together over a weekend, around two hundred parts is a lot for a 1:48 fighter, but the effort will be

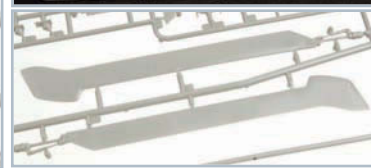
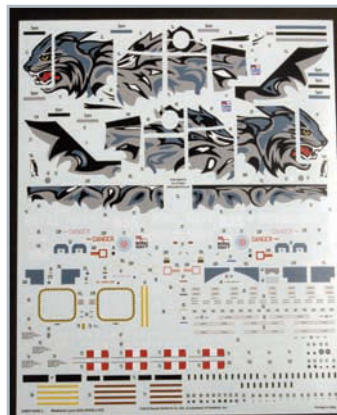
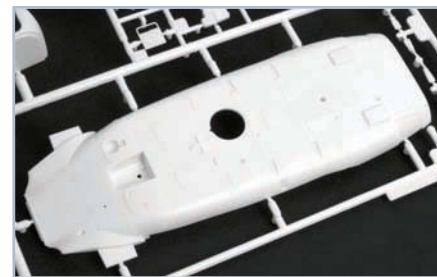
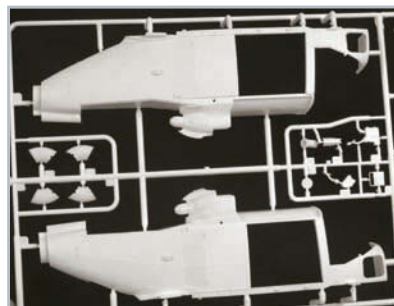
worth it. The separately bagged canopies are of equal quality with two complete open / closed options- even the pilot figure deserves to be displayed. Struggling to find a negative, maybe the decals are a weak point (common to Zvezda kits we've looked at) with smaller details filling-in. One Green Hearts option from the Eastern Front is offered but the reasonable price of Zvezda kits means you could happily treat yourself to something from the vast range of aftermarket markings. A great out of the box build with excellent wheel-well, engine and access panel detail at a price that's right, what more could we ask for?



Zvezda 1:48 Yak-3

With the same excellent tooling and finesse which has seen Zvezda equalling some of the major manufacturers from the far East, this Yak is ever bit as impressive as their 109. Inside the robust box are three sprues in pale grey and one in clear. The kit offers three options; in flight with the inclusion of a very nice pilot figure. Engine cowls removed or the usual closed up version. The canopy also has the option to be modelled in the open position. The cockpit assembly is a little different to normal, and is extremely well detailed and drops into the upper wing assembly, the assembled fuselage then drops over. The wooden and fabric surfaces of the airframe are obviously void of any panel lines or

fasteners, but where they are called for they're beautifully rendered. I'd guess around half the assembly is devoted to the superb fully detailed engine and framework, a little wiring added and you'll have a fantastic replica straight from the box. If you're more in the mood for a quicker build the closed cowl parts will be the way to go, Zvezda offer the perfect simple plug-on part solution - no trying to line up separate panels! Zvezda's weak spot tends to be the decals, three options of late-war Russian fighters are supplied, this sheet actually looks decent and very thin with a minimal of carrier film and good register. Very highly recommended.



Revell 1:32 Westland Lynx HAS.3

Very expected and very welcome is the release of a HAS.3 version of Revell's big scale Lynx. It's quite obvious which are the new sprues (along with some from the Mk.88A version) as they are moulded in a far more pleasing grey with the original white used for the generic Lynx parts (surely just a cost issue for Revell as the blinding white really doesn't do the appearance of the moulding any favours). Two sprues in all are new carrying parts for the nose, tail, tail rotor blades, engine cowls and various specific details all to the high standards of the original release we looked at in the previous issue of AIR. This kit offers the modeller a very comprehensive out-of-the-box project or the chance to go crazy with extra detailing on the full cockpit and cabin interior much of which is visible with the option to leave doors open. On a large scale 'copter the glazing is a prominent feature, thankfully Revell

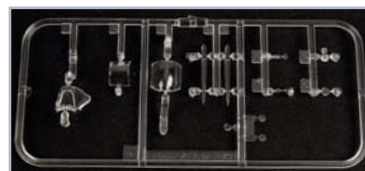
have taken measures to get this just right, just leaving it up to the modeller to spoil it with the inevitable fingerprint! One thing you may well choose to add is some rivet detail on the airframe which would be worthwhile at this scale. Another giant A4 size decal sheet is provided and of excellent quality although very challenging should you wish the 'Black Cats' scheme depicted on the box art which covers the majority of the rear fuselage and tail. Softening solution of choice at the ready, I'm sure the results will be quite spectacular. A more mundane scheme is included of HAS.3 ICE on board HMS Endurance in 2001. Another nice kit of the Lynx, and I'm sure not the last version, with a huge amount of modelling for your money. www.revell.eu has details of new releases which are available from good toy and hobby stores.



Revell 1:72 Mil Mi-24 V Hind E

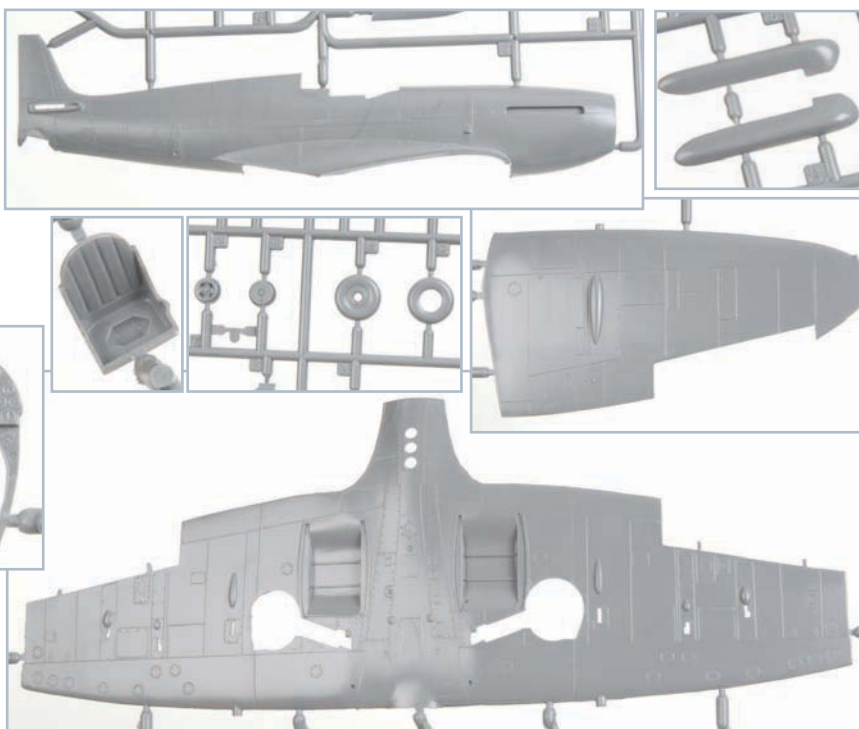
No surprise to see that this kit is indeed the previous release from Zvezda of this Russian beast, and looking over the pale grey sprues we're reminded of what a very comprehensive and highly detailed kit this is utilising state-of-the-art tooling. Our sample shows no signs of any flash and moulding is super-sharp throughout with very fine detail and also some very small and fine parts, I'd imagine this will be a challenging but rewarding project. Lots of options are included to open up the canopy, engine access panels and side doors to show all of the interior and engine detail- even a pair of crew figures are included with

separate limbs to ensure a good fit. The multi-part cockpits look busy and well detailed for this small scale but some may wince at the use of decals for the instrument panels. The engines and rotor head are well detailed and the blades beautifully thin with fine surface detail. External fuel tanks and weapons systems are well rendered. A bonus over the Zvezda release is the decal sheet with a regular looking Russian option and a very striking Czech scheme as depicted on the box art with large clawing tiger graphics. A lovely kit available at a very reasonable price, Revell kits are available at all good model and toy shops.



Revell 1:48 Seafire Mk.XV

More Revell re-boxing, this time the tooling is originally from MPM / Special Hobby, quite a recent production which certainly looks very fresh and sharply moulded in grey styrene with some excellent fine surface detail. Our sample has a tiny amount of flash to remove and a few swirl marks from the moulding process on some thicker parts but on the whole moulding is to an excellent standard on both the grey and clear sprues. To a complete Spitfire novice like myself, this is one of the most handsome of the marque to my eye and the features look well reproduced. The kit follows the usual traditional break-down of parts with features we expect to find now; separate control



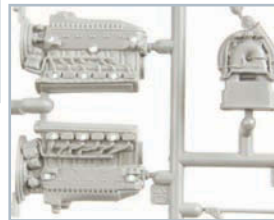
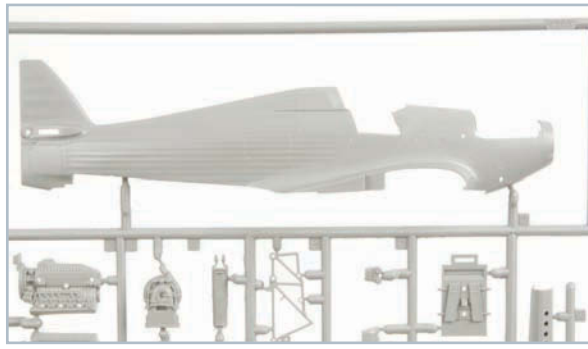
surfaces, nicely detailed cockpit with separate side walls, detailed wheel wells and finely detailed landing gear. This kit offers a good balance between high standards of detail out-of-the-box and a reasonable number of parts, some of which are very small and fine requiring gentle persuasion from the sprues. Two sets of similar markings are supplied on the quality decal sheet, both of the British Pacific Fleet 1945 / 46 based on HMS Glory and HMS Implacable. As more often than not with Revell's re-boxes we're offered kits second time around at a discounted price and more easily available. www.revell.eu has details of new releases which are available from good toy and hobby stores.



Revell 1:72 Hudson Mk.I/II Patrol Bomber

Fully expecting a Revell re-box here (which it is) I think I'd be correct assuming this kit is the previous MPM release which was also boxed by Italeri? Nevertheless, first impressions are that of an older tooling (although it's maybe less than ten years old?) lacking somewhat by modern standards with some soft undefined detail in places and some rather basic looking parts compared to some of the new releases we see these days. A good interior is provided which looks to be adequate for what will be visible on the finished model. Recessed panel lines are decent but much of the kit could

be described as a good starting point for some extra work and maybe a few aftermarket additions. Clear parts are also a little lacking but certainly useable the nose being in two halves and a separate front domed part (a solid nose is present on the sprues with other parts offering different versions) A small decal sheet of two RAF options is very nicely produced (presumably Cartograf produced). If you must build this little Lockheed the kit has always been a decent starting point for some extra detailing work should you wish.



Italeri 1:48 Sea Hurricane

Italeri's recently tooled Hurricane has the expected release in the Sea Hurricane guise giving us a welcome option of this lovely kit. Some new parts are provided, the most obvious the rear underside of the fuselage containing the arrestor hook. Italeri have done a good job of the cockpit with the tubular frame indicated and a suggestion of the open floor which will rely on painting to get the effect when viewed on the finished model. Photoetch is provided for the harness and facia, an altogether comprehensively detailed kit-supplied cockpit. More nice detail on the multi-part engine which can be displayed thanks to separate cowls, the

fuselage itself has a fine rendering of the fabric with realistic stretching in places and very fine recessed fasteners and panel lines. Control surfaces are supplied as separate pieces and the wheel wells and landing gear are very finely moulded with 'weighted' tyres and separate wheel hubs. Six options are provided by the Cartograf decals, five of which are from operation Pedestal in 1942 of aircraft operating from different vessels. These Hurricanes are very nicely detailed kits without being overly complex and offer great value, highly recommended.



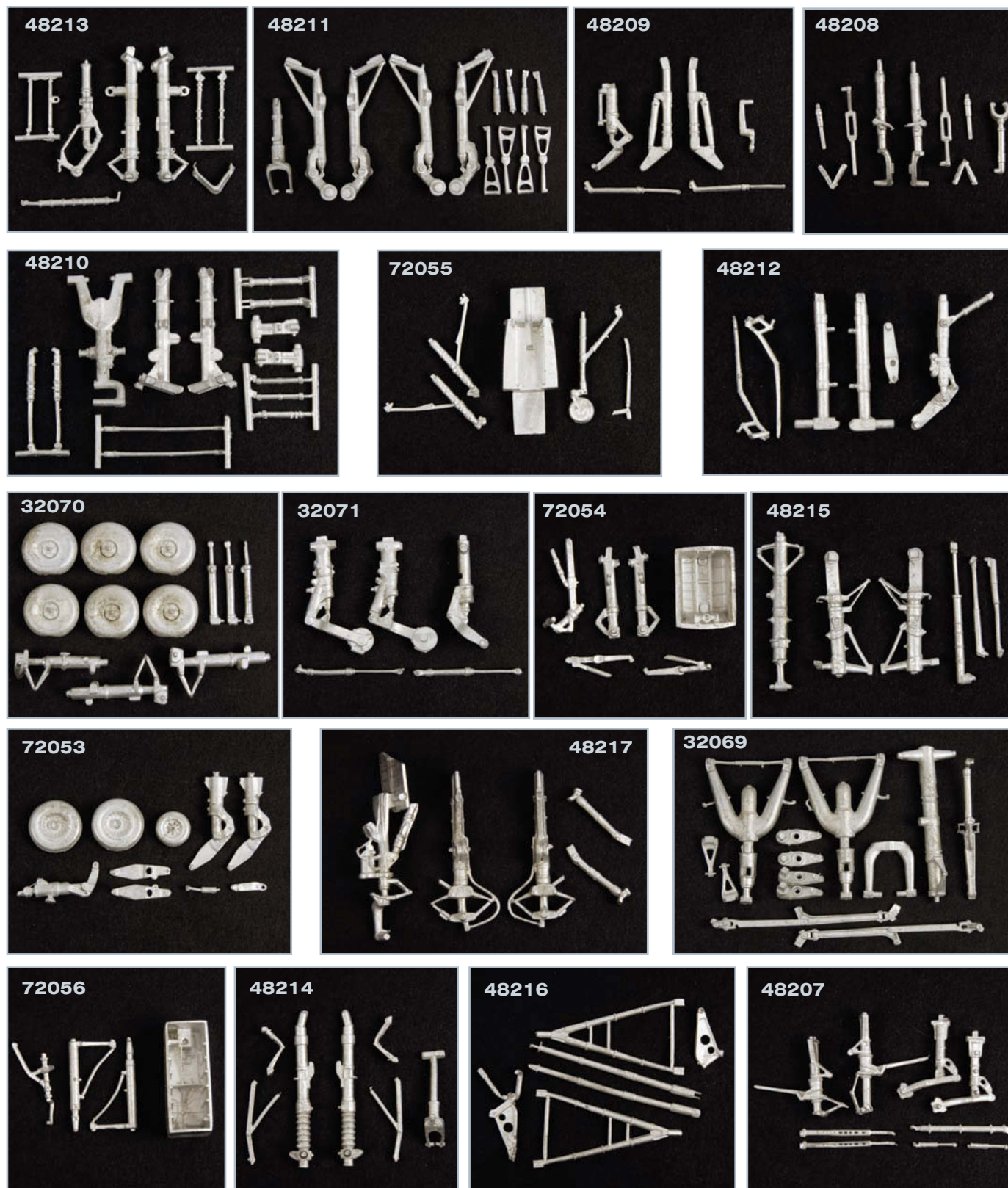
Polish Wings 16 Supermarine Spitfire XVI

By Wojtek Matusiak
Published by Stratus
ISBN: 978-83-61421-68-9
Softback portrait format 88 pages

Another absolute treat for Spitfire fans in this latest in the superb Polish Wings series. This volume covers units operating the Mark XVI in the final months of the war and into the post-war years and as usual is an absolute visual feast! Nearly 200 photographs of which about half are previously unpublished and some thirty colour profiles. For the modeller there is just so much to draw upon and if you have the Tamiya 1:32 Spitfire XVI in your stash then this book is the ideal reference to provide all those in service details or that individual set of markings. What is remarkable again in the archive pictures is just how dirty and worn many of the aircraft look, even in post-war conditions. Heavy exhaust



stains and worn wing roots are a feature of many of the photos. There are an excellent series of pictures showing aircraft being refuelled as well as some engine maintenance pictures which show the worn finish of the propeller superbly. The colour profiles are to the usual high standard of the rest of this series, mostly side profiles but there are some plan and underside views included too. The profiles are all tied to aircraft depicted in the photographs and included detailed views of unit badges where appropriate. If the Polish Wings series is unfamiliar to you it is well worth checking as these are a great series of books and if you are remotely interested in Spitfires you would be mad to miss out on this excellent reference. Available from Mushroom Model Publications at www.mmpbooks.biz



Scale Aircraft Conversions

A deep intake of breath now for another bumper batch of landing gear upgrades in white metal from SAC. Starting small with 1:72 72053 is for CMR or Airfix's Buccaneer, 72054 again for Airfix to suit their Canberra and 72055 for their A4-B. Meng's new F-102 gets the treatment with set 72056. 1:48 now, 48207 is for Kinetic's T-45, 48208 for Trumpeter's Spiteful & Seafang, 48209 for the Hobby Boss MiG-17, 48210 for the Kitty Hawk Sepecat Jaguar, 48211 provides some beefy legs for MPM's He177 and 48212 for the Trumpeter MiG-21. Great Wall's recent MiG-29 is upgraded with set 48213 and another new release, Meng's Me 410 is

catered for with 48214, 48215 is to suit Academy's F-4B, 48216 for the Gallery Models H-34 and finally in forty-eighth 48217 is designed for the Revell / Monogram A-10. Some weighty packs now in 1:32 with flavour of the moment the He 219, designed for Revell's kit set 32069. This set has been adjusted with the correct weighted heights and the nosewheel yoke is moulded separately to allow for easy pivoting. 32070 is for the Revel SA 330 Puma (complete with wheels) and finally 32071 upgrades Kinetic's Hawk 100.

www.scaleaircraftconversions is the place to go for more details.



Messerschmitt Bf 108 Taifun

By Jan Forsgren

Published by Mushroom Model Publications

Softback Portrait format 160 pages

ISBN: 978-83-61421-67-2

Another wonderfully complete reference work from MMP devoted to the precursor to the Me 109 the 108 which was originally designed as a civilian touring aircraft but saw extensive military service both with the Luftwaffe and numerous other countries. As usual with these guides the compact format manages to provide everything you would need for a modelling project. For a start there are loose leaf 1:48 scale plans complete with rivet patterns. The book begins with the developmental history of this advanced design and its performance in pre-war competitions. Next is a look at the Bf 108A and 108B in detail with both plans and a colour profile supporting the archive images. The production series is looked at with rare colour photos, 1:72 scale plans and

more colour profiles. The aircraft's service with the Luftwaffe is examined with plenty of archive photos and fifteen colour profiles. There is a detailed technical description and a look at the French built Nord 1000 version with plans and colour profiles. Foreign operators are discussed and supported with plenty of often colourful colour profiles and several colour photos too. Surviving examples are listed next before the book moves on to the detailed walkaround section. Plenty of good detailed photos along with drawings from the original aircraft manuals and just what you need for that detailed modelling project. Another cost-effective superb single source reference from MMP and details of this and the rest of the range can be found at www.mmpbooks.biz



Model Scene Grass Mats

Many aircraft modellers don't get into producing realistic groundwork to display their finished project, some beautiful models can be let down by poor groundwork but here's an easy solution from Czech manufacturer Model Scene. These grass 'mats' come in a size around A4 and can be easily cut to any shape required. The effect is very realistic and natural as you can see from our photographs, different colours and styles, this sample is MSF 600 'Forest Floor' which is particularly suited to larger scale WWI and WWII subjects. We especially like variations in colour across the mat which adds to the realism and of course a quick dusting with the airbrush could easily produce a different look. Quick, easy and extremely effective!

This excellent range is distributed in the UK by Historex Agents www.historexagents.com



Hasegawa's 1:48 kit modelled by Javier López de Anca García

Text by: Marta Ramírez Gómez



Battle of Midway - June 4th - June 7th 1942

Given its human and material resources, Japan could not support a war of attrition against U.S., so taking the initiative was essential. After the attack on Pearl Harbor, aimed at destroying the U.S. Pacific fleet, Japanese strategy was aimed at very specific territories to conquer, necessary to obtain resources or for the control of strategic points. But before embarking on this ambitious program they had to neutralize and take the Midway Islands, an atoll located northwest of Hawaii and controlled by the Americans.

Knowing that an attack on Midway would force the U.S. fleet into a showdown, the Japanese high command could not agree.

There were two facts which would help to accelerate plans for the invasion: the Doolittle Raid and the Battle of the Coral Sea.

In late May 1942 a fleet of over 200 vessels left Japan and the Mariana Islands including the aircraft carriers Soryu, Akagi and Kaga and Hiryu. The plan for the conquest of Midway which was approved by Admirals Osami Nagano and Yamamoto was based on the element of surprise, but American code breakers, were aware of the plans and Admiral Chester Nimitz took measures to strengthen Midway with planes, guns and men.

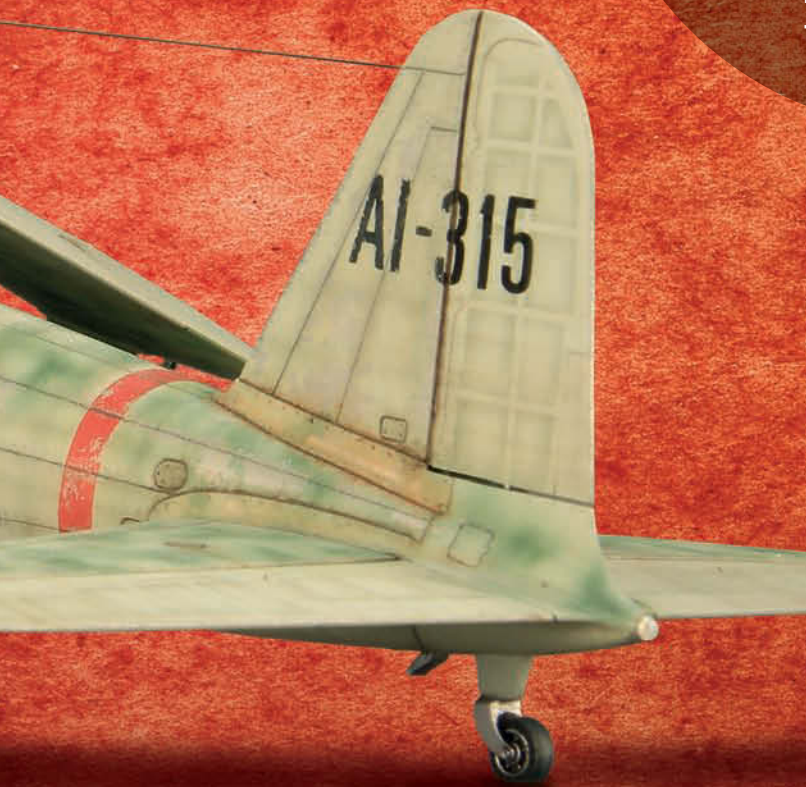
Nimitz had the aircraft carriers USS Hornet,

USS Enterprise and USS Yorktown commanded by Admiral Fletcher, key pieces in the naval strategy in the aftermath of Pearl Harbor. The first attacks were concentrated on the island, which could be bombed by the Japanese as the outdated U.S. fighters were no match for the swift escort Zeros and bombers were able to break through the defences. Initially, U.S. casualties were high, but soon they managed to turn the aircraft Admiral Nagumo's carrier Akagi into a smoking ruin.

Nakajima B5N2 KATE

Aircraft Carrier - **AKAGI**

June 4th 1942



The other aircraft Japanese, Hiryu launched their planes against Yorktown and hit it with bombs and torpedoes. In retaliation, American dive bombers from the Enterprise left the Hiryu engulfed in flames. The Yorktown was sunk by a Japanese submarine. After three days of intense fighting, Admiral Yamamoto, ended the fight and ordered the withdrawal of his forces. They had suffered the worst naval defeat in Japanese history. He lost his top four carriers, their best pilots, 275 aircraft and nearly 5,000 men. Meanwhile, the U.S. lost the aircraft carrier Yorktown, the destroyer Hamman, 150 aircraft and 307 men, but Midway remained in American hands.



The Kit

The kit complies with what we expect from a model by Hasegawa (ref. 09844). The plastic is good quality, with more than enough interior detail, especially if it is filled with Eduard photoetch (ref. 48363). The worst part of the kit is the clear canopy, this causes problems when placing the canopy, because they are too thick and do not fit on one another. Perhaps the biggest absence is the lack of options included, in particular the folding of the wings and torpedo. To finish I decided to improve the model by changing the wheels from True Details (ref. 48080) and a Vector resin engine (ref. 48019).

Small parts such as machine gun or the landing gear are very well resolved, with very fine detail and definition. The decals are quite thick, although in this case I decided not to use them.



The Cockpit

I constructed the cockpit as directed in the kit and added photoetch from Eduard. This required little improvement, some copper wire and a cover from plasticard for the back of radio. To paint I applied a coat based on light and shade, all with an airbrush. Once dry, I added a black oil wash and left it for a couple of days.

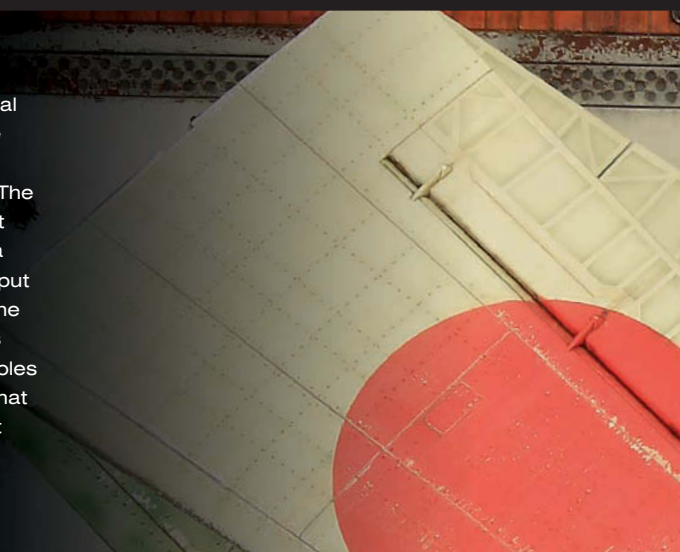
The next step was to dry brush, with which I had to be very careful. First, because it has to be a subtle effect, and secondly, because it is easier to dislodge the small parts, especially those in photoetch. To do this, it is advisable to use a soft brush and small amounts of paint as it is better to make several passes.

Once this is finished, I painted details of wear using acrylics and a fine brush. First with the chips, made a brush and others conducted with watercolor pencils. With graphite lead, imitated the most polished and finally deposited small amounts of pigment of different colours to simulate earthy accumulated dust.



Riveting

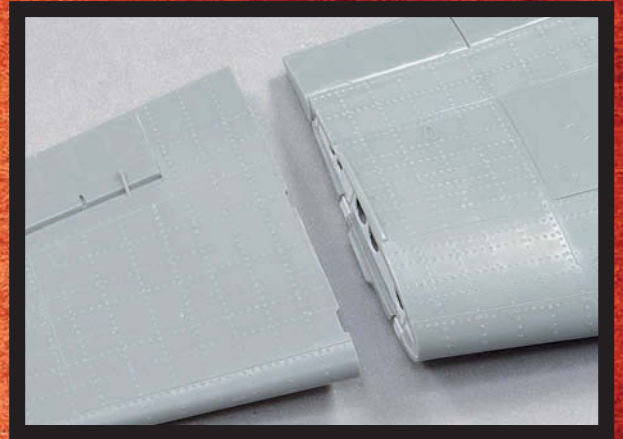
To rivet it is essential to have good scale plans, a tool and riveter Dymo tape. The process is easy but boring: First draw a line in pencil, then put the tape to guide the rivetting tool. Press firmly so that the holes are deep enough that they will not be lost during sanding.

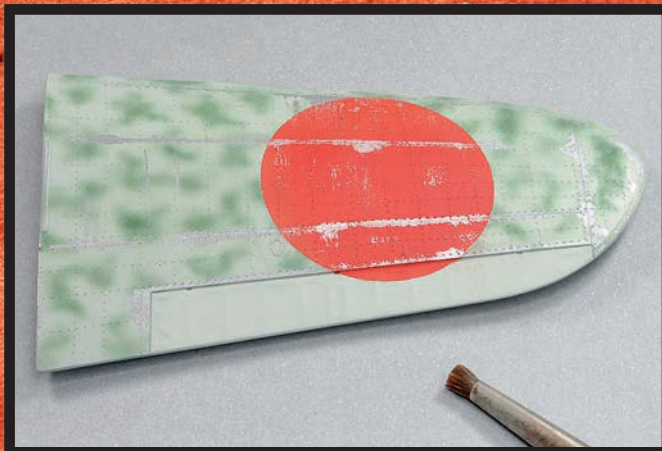
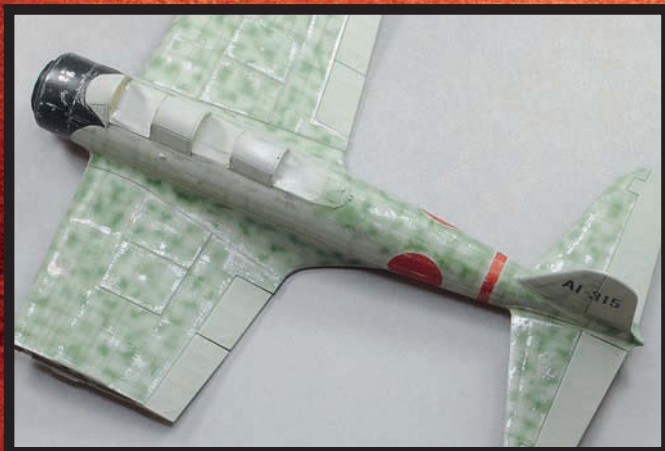


Assembly

There are two parts that had to be done carefully: the construction of the wing fold system and the wiring for the new Vector engine. To simulate the ribs of the wings that are visible when folding the wing. First I drew the outline of the piece on some plastic card and before giving its final form I replicated the holes using a punch. Each piece was then cut out with scissors, because this way is easier. Finally, I made the hinges, which was no problem. From here to the end I kept the two foldable wings separate to allow me to work comfortably and avoid accidents.

The drawback with the resin engine was that its diameter is slightly larger than the fairing. To resolve this, the only option is to sand the inside of the cowling until it fits. The finished piece is dangerously thin and weak, so when handling you must be very careful. Once I tested the fit, I added the actuators and cables (that Vector do not include). The truth is that the engine is a small model in itself. Moreover, the rest of the assembly gave no problems. I added the brake cable on the landing gear and also took time to adjust the glazing parts by sanding, which took time, as they overlap each other.





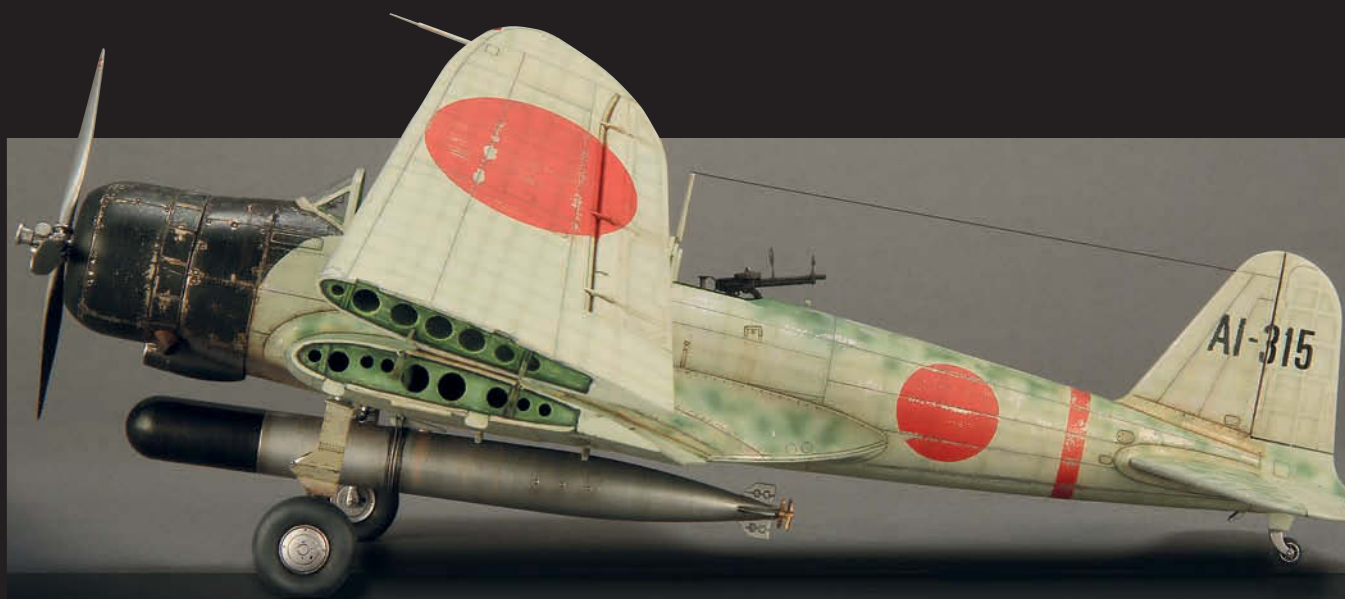
Painting

The scheme I chose is not the most common for Kate. The green was applied on the faded grey in spots. Besides this, I wanted to show the metallic chips, so common on Japanese planes. To do this, I used the hairspray technique. First I covered the whole aircraft with aluminium and left to dry. After applying the hairspray on the entire surface, I painted the grey base and then the green spots.

Quickly, I removed the paint in the areas I wanted to see the metallic undercoat using a stiff bristle brush dipped in water.

All this must be done quickly so the paint does not dry out and can still be lifted, it's a good idea to work on small sections at a time. If you have the opportunity to use two airbrushes, this will save cleaning time when changing between grey and green.

I decided to use hairspray, repeating the previous steps to paint the markings. Of course I made masks cut with a compass cutter, using the same sizes as the decals that are supplied with the model.





Colours Used:

Cockpit

Base: XF-71

Lights: 50% XF-71 + 50% XF-2

Shadows: XF-11

Camouflage

Base: 50% XF-76 + 25%

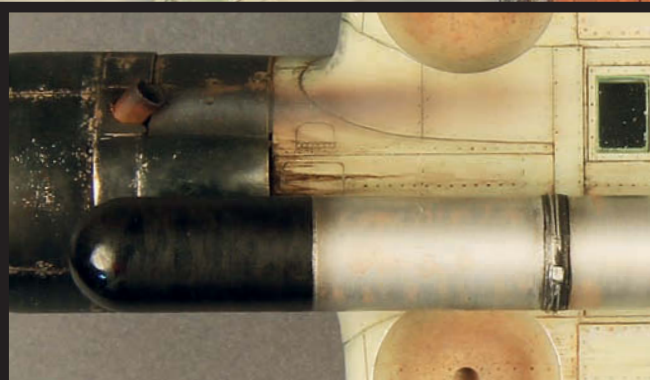
XF-19 + 25% XF-2

Mottled green: XF-11

Shadows: XF-27



With dark grey, very diluted, I outlined all the panels and rivet lines. The following process were oil washes, beginning with mixes transparent white, grey and green. For this, small amounts were deposited on the surface already dampened with Humbrol solvents and then blended together, with passes using a flat brush also dipped in the same solvent.



Brown spots of oil were imitated, but in certain areas, with particular emphasis on the wings roots and engine cowling. It was now time to varnish the model. To finish the paint, I painted shadows into the gaps along the control surfaces using 1mm thick tape, into which airbrushed a of highly diluted black-brown mixture. Taking advantage of the same paint, I added stains and imitated leaks, but then adding a lighter grey tone.



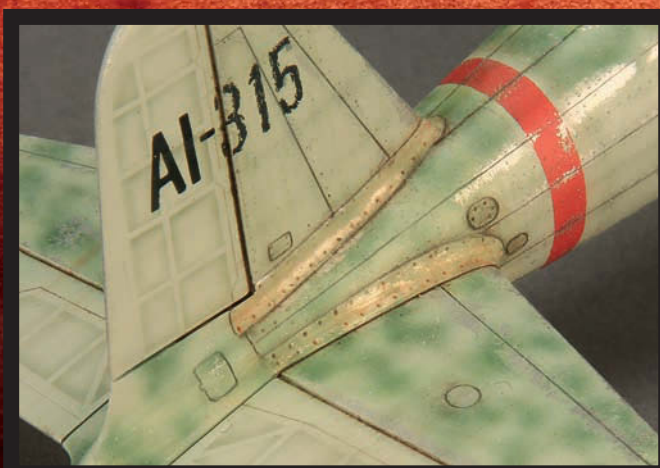
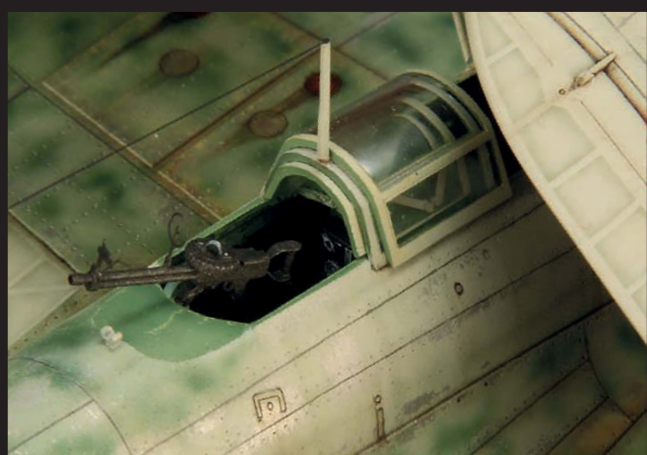
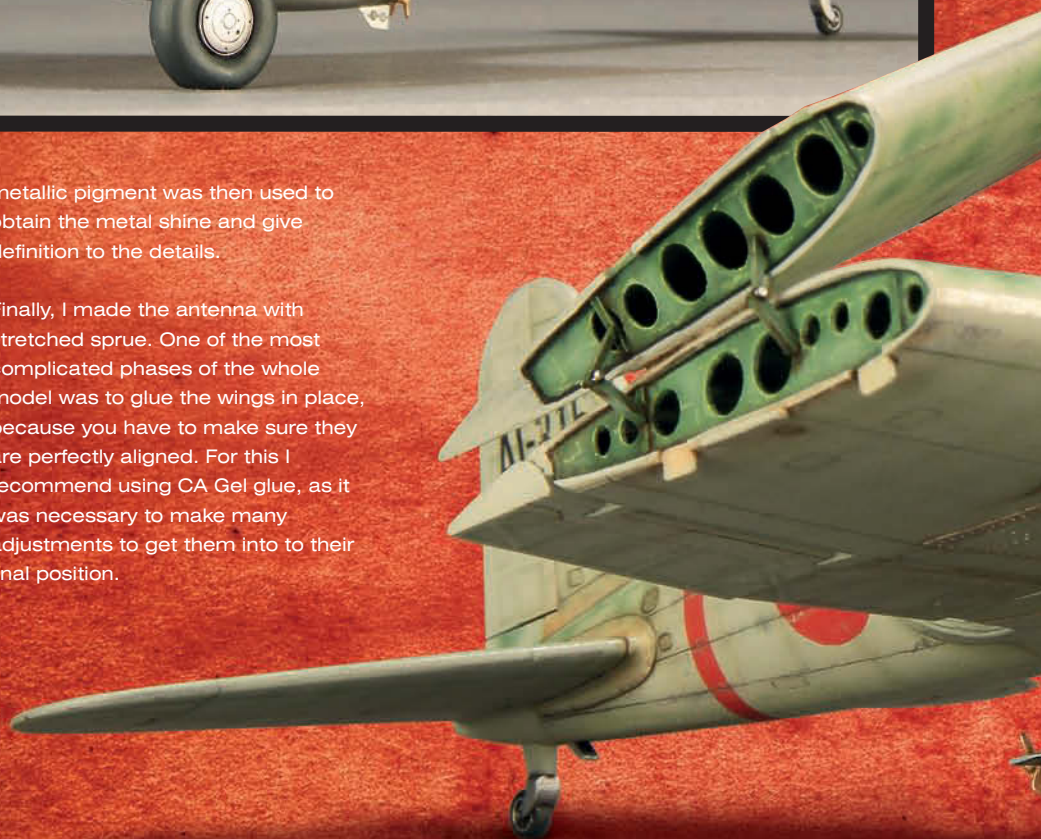
The torpedo comes from Tamiya's 1:48 Betty. To paint it I used Alclad steel and Tamiya gloss black. I only had to trim the fins and make holes for attaching it to the brackets. The propeller has an unusual finish, which is aluminium on the front face and black on the back and fits perfectly with the resin engine.

Another piece I worked separately was the machine gun, detailed with photoetched sights, which makes it a very delicate piece.

I painted it a matt black colour and

metallic pigment was then used to obtain the metal shine and give definition to the details.

Finally, I made the antenna with stretched sprue. One of the most complicated phases of the whole model was to glue the wings in place, because you have to make sure they are perfectly aligned. For this I recommend using CA Gel glue, as it was necessary to make many adjustments to get them into their final position.



Nakajima B5N2

KATE



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